

Appendix B

Air Quality Analysis

AIR QUALITY ANALYSIS

BAKER RANCH PROPERTIES
CITY OF LAKE FOREST, CALIFORNIA

LSA

April 2014

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BAKER RANCH PROPERTIES
CITY OF LAKE FOREST, CALIFORNIA

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April 2014

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APPENDIX

A: CALEEMOD MODEL PRINTOUTS

EXECUTIVE SUMMARY

LSA Associates, Inc. (LSA) was retained by Baker Ranch Properties, LLC to prepare an air quality study for a proposed residential development project to be located in the City of Lake Forest (City) in Orange County (County), California.

The air quality study provides a discussion of the proposed project, the physical setting of the project area, and the regulatory framework for air quality. The report provides data on existing air quality and evaluates potential air quality impacts associated with the proposed project. Modeled air quality levels are based upon default trip generation for the proposed uses included in the project.

Regional emissions during project construction, calculated with the CalEEMod (Version 2013.2.2) model, would not exceed criteria pollutant thresholds established by the South Coast Air Quality Management District (SCAQMD). Compliance with SCAQMD Rules and Regulations during construction will reduce construction-related air quality impacts from fugitive dust emissions and construction equipment emissions. Standard dust suppression measures have been identified for short-term construction to meet the SCAQMD emissions thresholds. The proposed project would not exceed the localized significance thresholds (LSTs).

Historical air quality data show that existing carbon monoxide (CO) levels for the project area and the general vicinity do not exceed either State or federal ambient air quality standards. The CO concentrations in the project area are much lower than the federal and State CO standards. The proposed project would not result in any significant increase in CO concentrations at intersections in the project vicinity. Therefore, project-related traffic would not significantly affect local CO levels under future year conditions, and the CO concentrations would be below the State and federal standards. No significant impact on local CO levels would occur. Pollutant emissions from project operation, also calculated with the CalEEMod model, would not exceed the SCAQMD thresholds for any criteria pollutants. LSTs would not be exceeded by long-term emissions from the operation of the project.

The proposed project is located in Orange County, which is not among the counties that are found to have serpentine and ultramafic rock in their soils. Therefore, the potential risk for naturally occurring asbestos (NOA) during project construction is small and less than significant.

The potential of the project to affect global climate change (GCC) is also included. Short-term construction and long-term operational emissions of the principal greenhouse gases (GHGs), including carbon dioxide (CO₂) and methane (CH₄), are quantified, and their significance relative to Assembly Bill (AB) 32 is discussed. The proposed project will not exceed any proposed GHG emissions thresholds or conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions.

The proposed uses would generate equivalent or less traffic than allowed uses for the project site, so it is consistent with General Plan of the City, which is consistent with the Southern California

Association of Governments (SCAG) Regional Comprehensive Plan (RCP) Guidelines and the SCAQMD Air Quality Management Plan (AQMP). Therefore, the proposed project is consistent with the General Plans and the regional AQMP.

The evaluation was prepared in conformance with appropriate standards, utilizing procedures and methodologies in the *SCAQMD California Environmental Quality Act (CEQA) Air Quality Handbook* (SCAQMD 1993) and associated updates. Air quality data posted on the California Air Resources Board (ARB) and United States Environmental Protection Agency (EPA) websites are included to document the local air quality environment.

INTRODUCTION

This air quality impact analysis has been prepared to evaluate the potential air quality impacts and mitigation measures associated with the proposed residential development project in the City of Lake Forest, in Orange County, California. This report provides a project-specific air quality impact analysis by examining the impacts of the proposed uses on adjacent sensitive uses as well as the impacts on the proposed uses on the project site, and evaluating the mitigation measures required as part of the project design. Guidelines identified by the SCAQMD in its *CEQA Air Quality Handbook* (SCAQMD, April 1993), and associated updates will be followed in this air quality impact analysis.

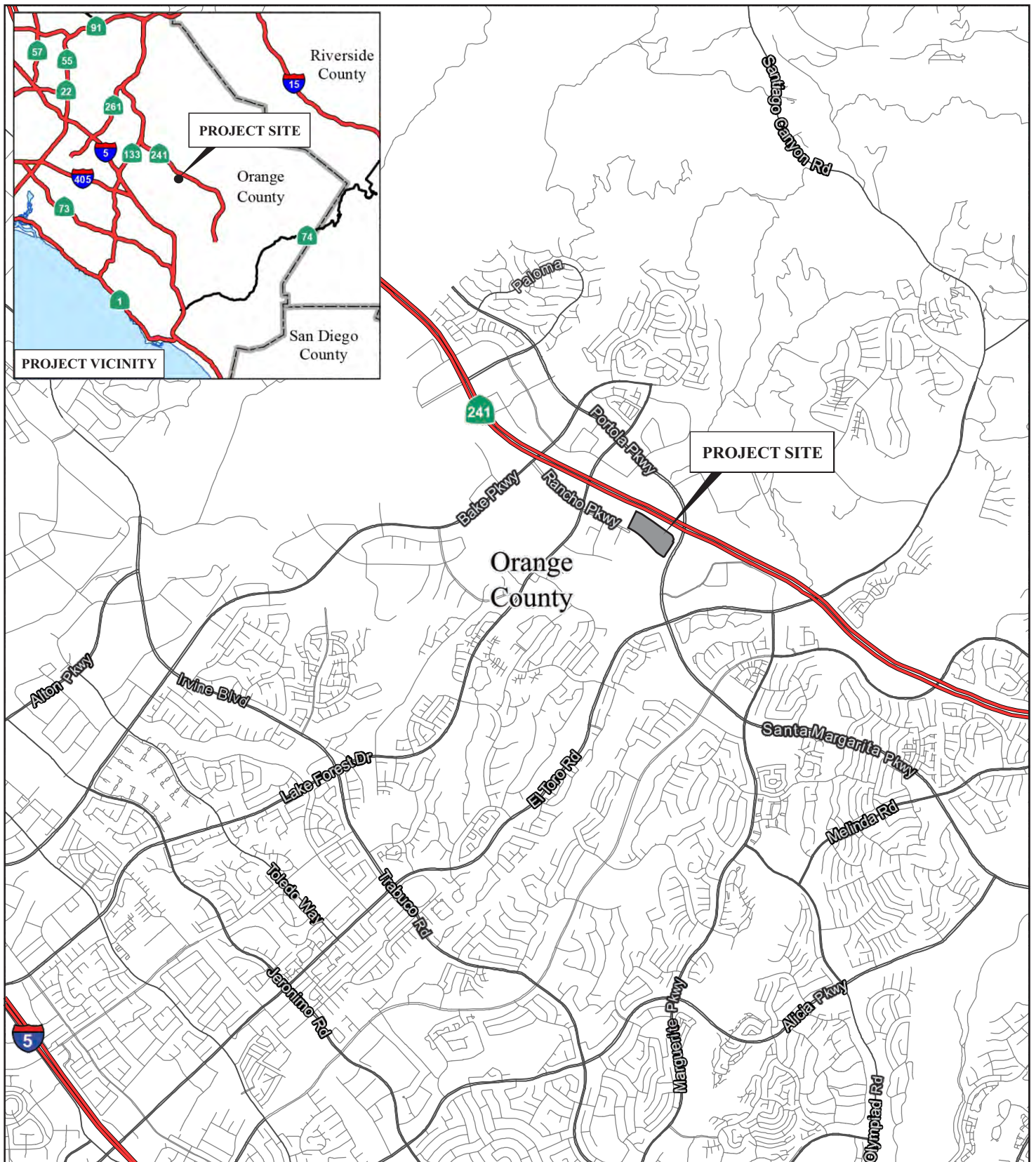
PROJECT DESCRIPTION

The proposed project site is 30.036 acres in the City of Lake Forest bounded by State Route 241 (SR-241) to the north, Rancho Parkway to the south, Portola Parkway to the east, and existing industrial uses to the west. The project location is illustrated in Figure 1, and the project conceptual plan is illustrated in Figure 2. The Baker Ranch Properties land uses will include up to 250 single-family dwelling units (DU), a swimming pool/recreational area, and a water quality control basin.

The existing project site is currently occupied by a variety of yard uses that will be displaced by the proposed project. The Baker Ranch Planned Community Text contemplates that the site could be developed with 341,499 square feet (sf) of commercial uses, so if the proposed project is not approved by the City, the currently allowed commercial use should be assumed, as the project site will not remain vacant or with current yard uses indefinitely.

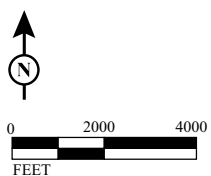
Land Uses in the Project Vicinity

There are no existing residential uses immediately adjacent to the project site. There are existing commercial and light industrial uses immediately to the west, Saddleback Church property to the east, and Lake Forest Sports Park to the south of the project site. The closest existing residential uses are located at least 1,500 feet (ft) to the south or southeast of the project site along El Toro Road.



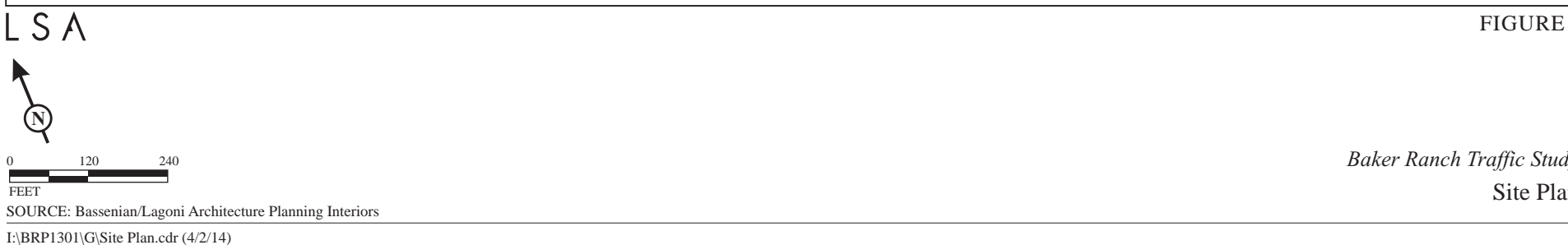
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FIGURE 1



SOURCE: Bing Maps (c. 2008); ESRI (2008)
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Baker Ranch Properties
 Project Location Map



Baker Ranch Traffic Study
Site Plan

PROJECT SETTING

REGIONAL AIR QUALITY

The project site is located in Orange County, California, which is part of the South Coast Air Basin (Basin) and is under the jurisdiction of the SCAQMD. The air quality assessment for the proposed project includes estimating emissions associated with short-term construction and long-term operation of the proposed project.

A number of air quality modeling tools are available to assess the air quality impacts of projects. In addition, certain air districts, such as the SCAQMD, have created guidelines and requirements to conduct air quality analyses. The SCAQMD's current guidelines, included in its *CEQA Air Quality Handbook* (April 1993) and associated updates, were adhered to in the assessment of air quality impacts for the proposed project.

Both the State of California (State) and the federal government have established health-based ambient air quality standards (AAQS) for seven air pollutants. As shown in Table A, these pollutants include ozone (O₃), CO, nitrogen dioxide (NO₂), sulfur dioxide (SO₂), particulate matter less than 10 microns in size (PM₁₀), particulate matter less than 2.5 microns in size (PM_{2.5}), and lead. In addition, the State has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles. These standards are designed to protect the health and welfare of the populace with a reasonable margin of safety.

In addition to setting out primary and secondary AAQS, the State has established a set of episode criteria for O₃, CO, NO₂, SO₂, and PM₁₀. These criteria refer to episode levels representing periods of short-term exposure to air pollutants that actually threaten public health. Health effects are progressively more severe as pollutant levels increase from Stage One to Stage Three. An alert level is that concentration of pollutants at which initial stage control actions are to begin. An alert will be declared when any one of the pollutant alert levels is reached at any monitoring site and meteorological conditions are such that the pollutant concentrations can be expected to remain at these levels for 12 or more hours or to increase; or, in the case of oxidants, the situation is likely to recur within the next 24 hours unless control actions are taken.

Pollutant alert levels:

- **O₃:** 392 micrograms per cubic meter (µg/m³) (0.20 parts per million [ppm]), 1-hour average
- **CO:** 17 milligrams per cubic meter (mg/m³) (15 ppm), 8-hour average
- **NO₂:** 1,130 µg/m³ (0.6 ppm), 1-hour average; 282 µg/m³ (0.15 ppm), 24-hour average
- **SO₂:** 800 µg/m³ (0.3 ppm), 24-hour average
- **Particulates, measured as PM₁₀:** 350 µg/m³, 24-hour average

Table A: Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards ¹		Federal Standards ²		
		Concentration ³	Method ⁴	Primary ^{3,5}	Secondary ^{3,6}	Method ⁷
Ozone (O ₃)	1-Hour	0.09 ppm (180 µg/m ³)	Ultraviolet Photometry	--	Same as Primary Standard	Ultraviolet Photometry
	8-Hour	0.070 ppm (137 µg/m ³)		0.075 ppm (147 µg/m ³)		
Respirable Particulate Matter (PM ₁₀) ⁸	24-Hour	50 µg/m ³	Gravimetric or Beta Attenuation	150 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	20 µg/m ³		--		
Fine Particulate Matter (PM _{2.5}) ⁸	24-Hour	No Separate State Standard		35 µg/m ³	Same as Primary Standard	Inertial Separation and Gravimetric Analysis
	Annual Arithmetic Mean	12 µg/m ³	Gravimetric or Beta Attenuation	12.0 µg/m ³	15 µg/m ³	
Carbon Monoxide (CO)	8-Hour	9.0 ppm (10 mg/m ³)	Non-Dispersive Infrared Photometry (NDIR)	9 ppm (10 mg/m ³)	None	Non-Dispersive Infrared Photometry (NDIR)
	1-Hour	20 ppm (23 mg/m ³)		35 ppm(40 mg/m ³)		
	8-Hour (Lake Tahoe)	6 ppm (7 mg/m ³)		—	—	—
Nitrogen Dioxide (NO ₂) ⁹	Annual Arithmetic Mean	0.030 ppm (57 µg/m ³)	Gas Phase Chemiluminescence	0.053 ppm (100 µg/m ³)	Same as Primary Standard	Gas Phase Chemiluminescence
	1-Hour	0.18 ppm (339 µg/m ³)		100 ppb (188 µg/m ³)	—	
Sulfur Dioxide (SO ₂) ¹⁰	Annual Arithmetic Mean	—	Ultraviolet Fluorescence	0.030 ppm (for certain areas) ⁹	—	Ultraviolet Fluorescence; Spectrophotometry (Pararosaniline Method)
	24-Hour	0.04 ppm (105 µg/m ³)		0.14 ppm (for certain areas) ⁹	—	
	3-Hour	—		—	0.5 ppm (1300 µg/m ³)	
	1-Hour	0.25 ppm (655 µg/m ³)		75 ppb (196 µg/m ³)	—	
Lead ^{11,12}	30-Day Average	1.5 µg/m ³	Atomic Absorption	—	—	High-Volume Sampler and Atomic Absorption
	Calendar Quarter	—		1.5 µg/m ³	Same as Primary Standard	
	Rolling 3-Month Average ¹¹	—		0.15 µg/m ³		
Visibility-Reducing Particles ¹³	8-Hour	See footnote 13	Beta Attenuation and Transmittance through Filter Tape	No Federal Standards		
Sulfates	24-Hour	25 µg/m ³	Ion Chromatography			
Hydrogen Sulfide	1-Hour	0.03 ppm (42 µg/m ³)	Ultraviolet Fluorescence			
Vinyl Chloride ¹¹	24-Hour	0.01 ppm (26 µg/m ³)	Gas Chromatography			

Source: California Air Resources Board (June 4, 2013).

Footnotes:

¹ California standards for O₃; CO (except Lake Tahoe); SO₂ (1- and 24-hour); NO₂; suspended particulate matter - PM₁₀, PM_{2.5} and visibility reducing particles, are values that are not to be exceeded. All others are not to be equalled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

² National standards (other than O₃, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once per year. The O₃ standard is attained when the fourth-highest 8-hour concentration in a year, averaged over 3 years, is equal to or less than the standard. For PM₁₀, the 24-hour standard is

attained when the expected number of days per calendar year with a 24-hour average concentration above $150 \mu\text{g}/\text{m}^3$ is equal to or less than 1. For $\text{PM}_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard. Contact the EPA for further clarification and current Federal policies.

- ³ Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based upon a reference temperature of 25°C and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; ppm in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.
- ⁴ Any equivalent procedure which can be shown to the satisfaction of ARB to give equivalent results at or near the level of the air quality standard may be used.
- ⁵ National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
- ⁶ National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.
- ⁷ Reference method as described by the EPA. An "equivalent method" of measurement may be used but must have a "consistent relationship to the reference method" and must be approved by the EPA.
- ⁸ On December 14, 2012, the national annual $\text{PM}_{2.5}$ primary standard was lowered from $15 \mu\text{g}/\text{m}^3$ to $12.0 \mu\text{g}/\text{m}^3$. The existing national 24-hour $\text{PM}_{2.5}$ standards (primary and secondary) were retained at $35 \mu\text{g}/\text{m}^3$, as was the annual secondary standard of $15 \mu\text{g}/\text{m}^3$. The existing 24-hour PM_{10} standards (primary and secondary) of $150 \mu\text{g}/\text{m}^3$ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.
- ⁹ To attain the 1-hour standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum 1-hour average at each monitor within an area must not exceed 100 ppb. Note that the national 1-hour standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the national 1-hour standard to the California standards, the units can be converted from ppb to ppm. In this case, the national standard of 100 ppb is identical to 0.100 ppm.
- ¹⁰ On June 2, 2010, the new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until 1 year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

Note that the 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.
- ¹¹ The ARB has identified lead and vinyl chloride as "toxic air contaminants" with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.
- ¹² The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard ($1.5 \mu\text{g}/\text{m}^3$ as a quarterly average) remains in effect until 1 year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standards are approved.
- ¹³ In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basins, respectively.

$^\circ\text{C}$ = degrees Celsius

ARB = California Air Resources Board

EPA = United States Environmental Protection Agency

$\mu\text{g}/\text{m}^3$ = micrograms per cubic meter

mg/m^3 = milligrams per cubic meter

ppm = parts per million

ppb = parts per billion

Table B lists the primary health effects and sources of common air pollutants. Because the concentration standards were set at a level that protects public health with an adequate margin of safety (EPA), these health effects will not occur unless the standards are exceeded by a large margin or for a prolonged period of time. State AAQS are more stringent than federal AAQS. Among the pollutants, O₃ and particulate matter (PM_{2.5} and PM₁₀) are considered regional pollutants, while the others have more localized effects.

Table B: Summary of Health Effects of the Major Criteria Air Pollutants

Pollutant	Health Effects	Examples of Sources
Particulate matter (PM ₁₀ : less than or equal to 10 microns)	<ul style="list-style-type: none">Increased respiratory diseaseLung damagePremature death	<ul style="list-style-type: none">Cars and trucks, especially dieselsFireplaces, wood stovesWindblown dust from roadways, agriculture, and construction
Ozone (O ₃)	<ul style="list-style-type: none">Breathing difficultiesLung damage	Formed by chemical reactions of air pollutants in the presence of sunlight; common sources are motor vehicles, industries, and consumer products
Carbon monoxide (CO)	<ul style="list-style-type: none">Chest pain in heart patientsHeadaches, nauseaReduced mental alertnessDeath at very high levels	Any source that burns fuel, such as cars, trucks, construction and farming equipment, and residential heaters and stoves
Nitrogen dioxide (NO ₂)	Lung damage	See carbon monoxide sources
Toxic air contaminants	<ul style="list-style-type: none">CancerChronic eye, lung, or skin irritationNeurological and reproductive disorders	<ul style="list-style-type: none">Cars and trucks, especially dieselsIndustrial sources such as chrome platersNeighborhood businesses such as dry cleaners and service stationsBuilding materials and products

Source: California Air Resources Board (2010).

The California Clean Air Act (CCAA) provides SCAQMD and other air districts with the authority to manage transportation activities at indirect sources. Indirect sources of pollution are generated when minor sources collectively emit a substantial amount of pollution. Examples of this would be the motor vehicles at an intersection, a mall, and on highways. The SCAQMD also regulates stationary sources of pollution throughout its jurisdictional area. Direct emissions from motor vehicles are regulated by the ARB.

Climate/Meteorology

Air quality in the planning area is not only affected by various emission sources (mobile, and industry, etc.), but also by atmospheric conditions such as wind speed, wind direction, temperature, rainfall, etc. The combination of topography, low mixing height, abundant sunshine, and emissions from the second largest urban area in the United States gives the Basin the worst air pollution problem in the nation.

The annual average temperature varies little throughout the Basin, ranging from the low to middle 60s, measured in degrees Fahrenheit (°F). With a more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas. The

climatological station closest to the site is the Tustin Irvine Ranch Station 3.¹ The monthly average maximum temperature recorded at this station from January 1902 to June 2003 ranged from 66.8°F in January to 85.2°F in August, with an annual average maximum of 75.4°F. The monthly average minimum temperature recorded at this station ranged from 40.2°F in January to 59.1°F in August, with an annual average minimum of 49.4°F. January is typically the coldest month, and August is typically the warmest month in this area of the Basin.

The majority of annual rainfall in the Basin occurs between November and April. Summer rainfall is minimal and is generally limited to scattered thundershowers in coastal regions and slightly heavier showers in the eastern portion of the Basin and along the coastal side of the mountains. The Tustin Irvine Ranch monitored precipitation from January 1902 to June 2003. Average monthly rainfall during that period varied from 2.67 inches in February to 0.45 inches or less between May and October, with an annual total of 12.86 inches. Patterns in monthly and yearly rainfall totals are unpredictable due to fluctuations in the weather.

The Basin experiences a persistent temperature inversion (increasing temperature with increasing altitude) as a result of the Pacific high. This inversion limits the vertical dispersion of air contaminants, holding them relatively near the ground. As the sun warms the ground and the lower air layer, the temperature of the lower air layer approaches the temperature of the base of the inversion (upper) layer until the inversion layer finally breaks, allowing vertical mixing with the lower layer. This phenomenon is observed in mid-afternoon to late afternoon on hot summer days, when the smog appears to clear up suddenly. Winter inversions frequently break by midmorning.

Winds in the vicinity of the project area blow predominantly from the south-southwest, with relatively low velocities. Wind speeds in the project area average about 5 miles per hour (mph). Summer wind speeds average slightly higher than winter wind speeds. Low average wind speeds, together with a persistent temperature inversion limit the vertical dispersion of air pollutants throughout the Basin. Strong, dry, north or northeasterly winds, known as Santa Ana winds, occur during the fall and winter months, dispersing air contaminants. The Santa Ana conditions tend to last for several days at a time.

The combination of stagnant wind conditions and low inversions produces the greatest pollutant concentrations. On days of no inversion or high wind speeds, ambient air pollutant concentrations are the lowest. During periods of low inversions and low wind speeds, air pollutants generated in urbanized areas are transported predominantly on shore into Riverside and San Bernardino Counties. In the winter, the greatest pollution problems are CO and nitrogen oxides (NO_x) because of extremely low inversions and air stagnation during the night and early morning hours. In the summer, the longer daylight hours and the brighter sunshine combine to cause a reaction between hydrocarbons and NO_x to form photochemical smog.

Description of Global Climate Change and its Sources

GCC is the observed increase in the average temperature of the Earth's atmosphere and oceans along with other significant changes in climate (such as precipitation or wind) that last for an extended

¹ Western Regional Climate Center, www.wrcc.dri.edu.

period of time. The term “global climate change” is often used interchangeably with the term “global warming,” but “global climate change” is preferred to “global warming” because it helps convey that there are other changes in addition to rising temperatures.

Climate change refers to any change in measures of weather (such as temperature, precipitation, or wind) lasting for an extended period (decades or longer). Climate change may result from natural factors, such as changes in the sun’s intensity; natural processes within the climate system, such as changes in ocean circulation; or human activities, such as the burning of fossil fuels, land clearing, or agriculture. The primary observed effect of GCC has been a rise in the average global tropospheric¹ temperature of 0.36°F per decade, determined from meteorological measurements worldwide between 1990 and 2005. Climate change modeling shows that further warming could occur, which would induce additional changes in the global climate system during the current century. Changes to the global climate system, ecosystems, and the environment of California could include higher sea levels, drier or wetter weather, changes in ocean salinity, changes in wind patterns, or more energetic aspects of extreme weather, including droughts, heavy precipitation, heat waves, extreme cold, and increased intensity of tropical cyclones. Specific effects in California might include a decline in the Sierra Nevada snowpack, erosion of California’s coastline, and seawater intrusion in the Delta.

Global surface temperatures have risen by $1.33^{\circ}\text{F} \pm 0.32^{\circ}\text{F}$ over the last 100 years (1906 to 2005). The rate of warming over the last 50 years is almost double that over the last 100 years.² The latest projections, based on state-of-the art climate models, indicate that temperatures in California are expected to rise 3–10.5°F by the end of the century.³ The prevailing scientific opinion on climate change is that “most of the warming observed over the last 50 years is attributable to human activities.”⁴ Increased amounts of CO₂ and other GHGs are the primary causes of the human-induced component of warming. The observed warming effect associated with the presence of GHGs in the atmosphere (from either natural or human sources) is often referred to as the greenhouse effect.⁵

GHGs are present in the atmosphere naturally, are released by natural sources, or are formed from secondary reactions taking place in the atmosphere. The gases that are widely seen as the principal contributors to human-induced GCC are:⁶

- CO₂
- CH₄

¹ The troposphere is the zone of the atmosphere characterized by water vapor, weather, winds, and decreasing temperature with increasing altitude.

² Intergovernmental Panel on Climate Change (IPCC), 2007. *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the IPCC*.

³ California Climate Change Center, 2006. *Our Changing Climate. Assessing the Risks to California*. July.

⁴ IPCC, *Climate Change 2007: The Physical Science Basis*, <http://www.ipcc.ch>.

⁵ The temperature on Earth is regulated by a system commonly known as the “greenhouse effect.” Just as the glass in a greenhouse lets heat from sunlight in and reduces the amount of heat that escapes, GHGs like CO₂, CH₄, and nitrous oxide (N₂O) in the atmosphere keep the Earth at a relatively even temperature. Without the greenhouse effect, the Earth would be a frozen globe; thus, although an excess of GHG results in global warming, the *naturally occurring* greenhouse effect is necessary to keep our planet at a comfortable temperature.

⁶ The GHGs listed are consistent with the definition in AB 32 (Government Code 38505), as discussed later in this section.

- N₂O
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PFCs)
- Sulfur hexafluoride (SF₆)

Over the last 200 years, human activities have caused substantial quantities of GHGs to be released into the atmosphere. These extra emissions are increasing GHG concentrations in the atmosphere and enhancing the natural greenhouse effect, which is believed to be causing global warming. While GHGs produced by human activities include naturally occurring GHGs such as CO₂, CH₄, and N₂O, some gases, like HFCs, PFCs, and SF₆, are completely new to the atmosphere. Certain other gases, such as water vapor, are short-lived in the atmosphere as compared to these GHGs that remain in the atmosphere for significant periods of time, contributing to climate change in the long term. Water vapor is generally excluded from the list of GHGs because it is short-lived in the atmosphere and its atmospheric concentrations are largely determined by natural processes, such as oceanic evaporation. For the purposes of this air quality study, the term “GHGs” will refer collectively to the six gases identified in the bulleted list provided above.

These gases vary considerably in terms of Global Warming Potential (GWP), which is a concept developed to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. GWP is based on several factors, including the relative effectiveness of a gas in absorbing infrared radiation and the length of time that the gas remains in the atmosphere (“atmospheric lifetime”). GWP of each gas is measured relative to CO₂, the most abundant GHG. The definition of GWP for a particular GHG is the ratio of heat trapped by one unit mass of the GHG to the ratio of heat trapped by one unit mass of CO₂ over a specified time period. GHG emissions are typically measured in terms of metric tons (MT)¹ of “CO₂ equivalents” (CO₂e). Table C shows the GWPs for each type of GHG analyzed in this report. For example, N₂O is 265 times more potent at contributing to global warming than CO₂.

Table C: Global Warming Potential of Greenhouse Gases

Gas	Atmospheric Lifetime (Years)	Global Warming Potential (100-year Time Horizon)
Carbon Dioxide (CO ₂)	~100	1
Methane (CH ₄)	12	28
Nitrous Oxide (N ₂ O)	121	265

Source: ARB, *Proposed First Update to the Climate Change Scoping Plan: Building on the Framework* (February 2014).

HFC = hydrofluorocarbons

IPCC = Intergovernmental Panel on Climate Change

PFC = perfluorocarbons

The following discussion summarizes the characteristics of the six primary GHGs.

¹ A metric ton is equivalent to approximately 1.1 tons.

Carbon Dioxide. In the atmosphere, carbon generally exists in its oxidized form, as CO₂. Natural sources of CO₂ include the respiration (breathing) of humans, animals, and plants; volcanic outgassing; decomposition of organic matter; and evaporation from the oceans. Human-caused sources of CO₂ include the combustion of fossil fuels and wood, waste incineration, mineral production, and deforestation. The Earth maintains a natural carbon balance, and when concentrations of CO₂ are upset, the system gradually returns to its natural state through natural processes. Natural changes to the carbon cycle work slowly, especially compared to the rapid rate at which humans are adding CO₂ to the atmosphere. Natural removal processes, such as photosynthesis by land- and ocean-dwelling plant species, cannot keep pace with this extra input of human-made CO₂, and consequently the gas is building up in the atmosphere. The concentration of CO₂ in the atmosphere has risen approximately 30 percent since the late 1800s.¹

The transportation sector remains the largest source of GHG emissions in 2011 with 37.6 percent of California's GHG emission inventory. The largest emissions category within the transportation sector is on-road, which consists of passenger vehicles (cars, motorcycles, and light-duty trucks) and heavy duty trucks and buses. Emissions from on-road constitute over 92 percent of the transportation sector total. Industry and electricity generation were California's second- and third-largest categories of GHG emissions, respectively.

Methane. CH₄ is produced when organic matter decomposes in environments lacking sufficient oxygen. Natural sources include wetlands, termites, and oceans. Anthropogenic sources include rice cultivation, livestock, landfills and waste treatment, biomass burning, and fossil fuel combustion (burning of coal, oil, and natural gas, etc.). Emissions from the recycling and waste sector consist of CH₄ and N₂O emissions from landfills and from commercial-scale composting. Emissions from recycling and waste grew from 6.3 million metric tons of CO₂e in 2001 to 7.0 million metric tons in 2011.² As with CO₂, the major removal process of atmospheric CH₄—a chemical breakdown in the atmosphere—cannot keep pace with source emissions, and CH₄ concentrations in the atmosphere are increasing.

Nitrous Oxide. N₂O is produced naturally by a wide variety of biological sources, particularly microbial action in soils and water. Tropical soils and oceans account for the majority of natural source emissions. N₂O is a product of the reaction that occurs between nitrogen and oxygen during fuel combustion. Both mobile and stationary combustion emit N₂O, and the quantity emitted varies according to the type of fuel, technology, and pollution control device used, as well as maintenance and operating practices. Agricultural soil management and fossil fuel combustion are the primary sources of human-generated N₂O emissions in California.

¹ National Assessment Synthesis Team [NAST], 2001.

² California Air Resources Board (ARB), Greenhouse Gas Inventory Data – 2000 to 2011.
<http://www.arb.ca.gov/cc/inventory/data/data.htm> (accessed April 2014).

Hydrofluorocarbons, Perfluorocarbons, and Sulfur Hexafluoride. HFCs are primarily used as substitutes for O₃-depleting substances regulated under the Montreal Protocol.¹ PFCs and SF₆ are emitted from various industrial processes, including aluminum smelting, semiconductor manufacturing, electric power transmission and distribution, and magnesium casting. There is no aluminum or magnesium production in California; however, the rapid growth in the semiconductor industry, which is active in California, has led to greater use of PFCs. However, there are no known project-related emissions of these three GHGs, so these are not discussed further: HFCs, PFCs, and SF₆.

Emissions Sources and Inventories

An emissions inventory that identifies and quantifies the primary human-generated sources and sinks of GHGs is a well-recognized and useful tool for addressing climate change. This section summarizes the latest information on global, national, California, and local GHG emission inventories. However, because GHGs persist for a long time in the atmosphere (see Table C), accumulate over time, and are generally well mixed, their impact on the atmosphere and climate cannot be tied to a specific point of emission.

Global Emissions. Worldwide emissions of GHGs in 2011 totaled 34.6 billion MT of CO₂e per year (CO₂e/yr).² Global estimates are based on country inventories developed as part of the programs of the United Nations Framework Convention on Climate Change (UNFCCC).

United States Emissions. In 2012, the United States emitted approximately 6.5 billion MT of CO₂e, down from 7.3 billion MT in 2007. Of the six major sectors nationwide—electric power industry, transportation, industry, agriculture, commercial, and residential—the electric power industry and transportation sectors combined account for approximately 70 percent of the GHG emissions; the majority of the electric power industry and all of the transportation emissions are generated from direct fossil fuel combustion. In 2012, the total United States GHG emissions were approximately 5.3 percent greater than 1990 levels.³

State of California Emissions. According to California ARB emission inventory estimates, California emitted approximately 448 million metric tons (MMT) of CO₂e (MMTCO₂e) emissions in 2011.⁴ This large number is due primarily to the sheer size of California compared to other states. By

¹ The Montreal Protocol is an international treaty that was approved on January 1, 1989, and was designated to protect the ozone layer by phasing out the production of several groups of halogenated hydrocarbons believed to be responsible for O₃ depletion and which are also potent greenhouse gases.

² UNFCCC, Combined total of Annex I and Non-Annex I Country CO₂e emissions. 2014. *Greenhouse Gas Inventory Data*. Information available at http://unfccc.int/ghg_data/ghg_data_unfccc/items/4146.php (accessed April 2014).

³ EPA. 2014. The 2014 U.S. Greenhouse Gas Inventory Report. <http://www.epa.gov/climatechange/emissions/usinventoryreport.html> (accessed April 2014).

⁴ ARB, Greenhouse Gas Inventory Data – 2000 to 2011. <http://www.arb.ca.gov/cc/inventory/data/data.htm> (accessed April 2014).

contrast, California has the fourth-lowest per-capita CO₂ emission rate from fossil fuel combustion in the country due to the success of its energy efficiency and renewable energy programs and commitments that have lowered the State's GHG emissions rate of growth by more than half of what it would have been otherwise.¹

The California ARB estimates that transportation was the source of approximately 38 percent of the State's GHG emissions in 2011, followed by electricity generation (both in-State and out-of-State) at 19 percent and industrial sources at 21 percent. The remaining sources of GHG emissions were residential and commercial activities at 10 percent, agriculture at 7 percent, high-GWP gases at 3 percent, and recycling and waste at 2 percent.²

The California ARB is responsible for developing the California Greenhouse Gas Emission Inventory. This inventory estimates the amount of GHGs emitted to and removed from the atmosphere by human activities within the State and supports the AB 32 Climate Change Program. The California ARB's current GHG emission inventory covers the years 1990–2011 and is based on fuel use, equipment activity, industrial processes, and other relevant data (e.g., housing, landfill activity, agricultural lands). The emission inventory estimates are based on the actual amount of all fuels combusted in the State, which accounts for over 85 percent of the GHG emissions within California.

The California ARB staff has projected statewide unregulated GHG emissions for 2020, which represent the emissions that would be expected to occur in the absence of any GHG reduction actions, at 507 MMTCO₂e. GHG emissions from the transportation and electricity sectors as a whole are expected to increase but remain at approximately 36 percent and 24 percent of total CO₂e emissions, respectively. The industrial sector consists of large stationary sources of GHG emissions, and the percentage of the total 2020 emissions is projected to be 18 percent of total CO₂e emissions.³

Air Pollution Constituents and Attainment Status

The ARB coordinates and oversees both State and federal air pollution control programs in California. The ARB oversees activities of local air quality management agencies and maintains air quality monitoring stations throughout the State in conjunction with the EPA and local air districts. The ARB has divided the State into 15 air basins based on meteorological and topographical factors of air pollution. Data collected at these stations are used by the ARB and EPA to classify air basins as attainment, nonattainment, nonattainment-transitional, or unclassified, based on air quality data for the most recent 3 calendar years compared with the AAQS. Nonattainment areas are imposed with additional restrictions as required by the EPA. The air quality data are also used to monitor progress in attaining air quality standards. Table D lists the attainment status for the criteria pollutants in the Basin.

¹ California Energy Commission (CEC), 2007. Inventory of California Greenhouse Gas Emissions and Sinks: 1990 to 2004 – Final Staff Report, publication # CEC-600-2006-013-sf, Sacramento, CA, December 22, 2006; and January 23, 2007, update to that report.

² ARB, 2013. <http://www.arb.ca.gov/cc/inventory/data/data.htm> (October 2013).

³ ARB, 2014. <http://www.arb.ca.gov/cc/inventory/data/data.htm> (April 2014).

Table D: Attainment Status of Criteria Pollutants in the South Coast Air Basin

Pollutant	State	Federal
O ₃ 1-hour	Nonattainment	N/A
O ₃ 8-hour	Nonattainment	Extreme Nonattainment
PM ₁₀	Nonattainment	Attainment/Maintenance
PM _{2.5}	Nonattainment	Nonattainment
CO	Attainment	Attainment/Maintenance
NO ₂	Nonattainment	Attainment/Maintenance
SO ₂	Attainment	Attainment
Lead	Attainment ¹	Attainment ¹
All others	Attainment/Unclassified	Attainment/Unclassified

Source: California Air Resources Board (2013) (<http://www.arb.ca.gov/desig/desig.htm>).

¹ Except in Los Angeles County.

CO = carbon monoxide

N/A = not applicable

NO₂ = nitrogen dioxide

O₃ = ozone

PM₁₀ = particulate matter less than 10 microns in diameter

PM_{2.5} = particulate matter less than 2.5 microns in diameter

SO₂ = sulfur dioxide

Ozone. O₃ (smog) is formed by photochemical reactions between oxides of nitrogen and reactive organic gases (ROGs) rather than being directly emitted. O₃ is a pungent, colorless gas typical of Southern California smog. Elevated O₃ concentrations result in reduced lung function, particularly during vigorous physical activity. This health problem is particularly acute in sensitive receptors such as the sick, the elderly, and young children. O₃ levels peak during summer and early fall. The entire Basin is designated as a nonattainment area for the State 1-hour and 8-hour O₃ standards. The EPA has officially designated the status for most of the Basin regarding the 8-hour O₃ standard as “Extreme,” which means the Basin has until 2024 to attain the federal 8-hour O₃ standard.

Carbon Monoxide. CO is formed by the incomplete combustion of fossil fuels, almost entirely from automobiles. It is a colorless, odorless gas that can cause dizziness, fatigue, and impairments to central nervous system functions. The entire Basin is in attainment for the State standards for CO. The Basin is designated as an “Attainment/Maintenance” area under the federal CO standards.

Nitrogen Oxides. NO₂, a reddish brown gas, and nitric oxide (NO), a colorless, odorless gas, are formed from fuel combustion under high temperature or pressure. These compounds are referred to as nitrogen oxides, or NO_x. NO_x is a primary component of the photochemical smog reaction. It also contributes to other pollution problems, including a high concentration of fine particulate matter, poor visibility, and acid deposition (i.e., acid rain). NO₂ decreases lung function and may reduce resistance to infection. The entire Basin is designated as nonattainment for the State NO₂ standard and as an “Attainment/Maintenance” area under the federal NO₂ standard.

Sulfur Dioxide. SO₂ is a colorless irritating gas formed primarily from incomplete combustion of fuels containing sulfur. Industrial facilities also contribute to gaseous SO₂ levels. SO₂ irritates the respiratory tract, can injure lung tissue when combined with fine particulate matter, and reduces visibility and the level of sunlight. The entire Basin is in attainment with both federal and State SO₂ standards.

Lead. Lead is found in old paints and coatings, plumbing, and a variety of other materials. Once in the blood stream, lead can cause damage to the brain, nervous system, and other body systems. Children are highly susceptible to the effects of lead. The Los Angeles County portion of the Basin was re-designated as nonattainment for the State and federal standards for lead in 2010.

Particulate Matter. Particulate matter (PM) is the term used for a mixture of solid particles and liquid droplets found in the air. Coarse particles (PM₁₀) derive from a variety of sources, including windblown dust and grinding operations. Fuel combustion and resultant exhaust from power plants and diesel buses and trucks are primarily responsible for fine particle (PM_{2.5}) levels. Fine particles can also be formed in the atmosphere through chemical reactions. PM₁₀ can accumulate in the respiratory system and aggravate health problems such as asthma. The EPA's scientific review concluded that PM_{2.5}, which penetrate deeply into the lungs, are more likely than coarse particles to contribute to the health effects listed in a number of recently published community epidemiological studies at concentrations that extend well below those allowed by the current PM₁₀ standards. These health effects include premature death and increased hospital admissions and emergency room visits (primarily the elderly and individuals with cardiopulmonary disease); increased respiratory symptoms and disease (children and individuals with cardiopulmonary disease such as asthma); decreased lung functions (particularly in children and individuals with asthma); and alterations in lung tissue and structure and in respiratory tract defense mechanisms. The Basin is designated nonattainment for the federal and State PM_{2.5} standards and State PM₁₀ standard, and attainment/maintenance for the federal PM₁₀ standard.

Volatile Organic Compounds. Volatile organic compounds (VOCs; also known as ROGs, and reactive organic compounds [ROCs]) are formed from the combustion of fuels and the evaporation of organic solvents. VOCs are not defined as criteria pollutants, but are a prime component of the photochemical smog reaction. Consequently, VOCs accumulate in the atmosphere more quickly during the winter when sunlight is limited and photochemical reactions are slower. There are no attainment designations for VOCs.

Sulfates. Sulfates occur in combination with metal and/or hydrogen ions. In California, emissions of sulfur compounds occur primarily from the combustion of petroleum-derived fuels (e.g., gasoline and diesel fuel) that contain sulfur. This sulfur is oxidized to SO₂ during the combustion process and subsequently is converted to sulfate compounds in the atmosphere. The conversion of SO₂ to sulfates takes place comparatively rapidly and completely in urban areas of California due to regional meteorological features. The entire Basin is in attainment for the State standard for sulfates.

Hydrogen Sulfide. Hydrogen sulfide (H₂S) is a colorless gas with the odor of rotten eggs. It is formed during bacterial decomposition of sulfur-containing organic substances. Also, it can be present in sewer gas and some natural gas and can be emitted as the result of geothermal energy exploitation. In 1984, an ARB committee concluded that the ambient standard for H₂S is adequate to protect public health and to significantly reduce odor annoyance. The entire Basin is unclassified for the State standard for hydrogen sulfide.

Visibility-Reducing Particles. Visibility-reducing particles consist of suspended particulate matter, which is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size, and chemical composition, and can be made up of many different materials such as metals, soot, soil, dust, and salt. The statewide standard is intended to limit the frequency and severity of visibility impairment due to regional haze. The entire Basin is unclassified for the State standard for visibility-reducing particles.

Hazardous Air Pollutants

The public's exposure to toxic air contaminant (TAC) is a significant environmental health issue in the State. In 1983, the California Legislature enacted a program to identify the health effects of TACs and to reduce exposure to these contaminants to protect the public health. The Health and Safety Code defines a TAC as "an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health." A substance that is listed as a hazardous air pollutant pursuant to subsection (b) of Section 112 of the Federal Act (42 United States Code [USC] Section 7412[b]) is a TAC. Under State law, the California Environmental Protection Agency (CalEPA), acting through the ARB, is authorized to identify a substance as a TAC if it determines the substance is an air pollutant which may cause or contribute to an increase in mortality or an increase in serious illness, or which may pose a present or potential hazard to human health.

California regulates TACs primarily through Assembly Bill (AB) 1807 (Tanner Air Toxics Act) and AB 2588 (Air Toxics "Hot Spot" Information and Assessment Act of 1987). The Tanner Air Toxics Act sets forth a formal procedure for ARB to designate substances as TACs. Once a TAC is identified, ARB adopts an "airborne toxics control measure" for sources that emit designated TACs. If there is a safe threshold for a substance at which there is no toxic effect, the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate toxics best available control technology (T-BACT) to minimize emissions.

Air toxics from stationary sources are also regulated in California under the Air Toxics "Hot Spot" Information and Assessment Act of 1987. Under AB 2588, TAC emissions from individual facilities are quantified and prioritized by the air quality management district or air pollution control district. High priority facilities are required to perform a health risk assessment and, if specific thresholds are exceeded, required to communicate the results to the public in the form of notices and public meetings.

To date, the ARB has designated nearly 200 compounds as TACs. Additionally, the ARB has implemented control measures for a number of compounds that pose high risks and show potential for effective control. The majority of the estimated health risks from TACs can be attributed to relatively few compounds, the most important being particulate matter from diesel-fueled engines (DPM).

LOCAL AIR QUALITY

SCAQMD, together with ARB, maintains ambient air quality monitoring stations in the Basin. The air quality monitoring station closest to the site is the Mission Viejo station, which monitors most air pollutant data, except NO₂ and SO₂, which were obtained from the Costa Mesa station. The air quality trends from these two stations are used to represent the ambient air quality in the project area. The pollutants monitored are CO, O₃, PM₁₀, PM_{2.5}, NO₂, and SO₂.¹ The ambient air quality data in Table E show that NO₂, SO₂, federal State 24-hour PM₁₀ standard, federal 24-hour PM_{2.5} standard, federal and State annual average PM_{2.5} standards, and CO levels are below the applicable State and federal standards.

The State 1-hour O₃ standard was exceeded up to 2 times per year in the past 3 years. The federal 8-hour O₃ standard was exceeded 1 to 2 days a year in the past 3 years, and the State 8-hour O₃ standard was exceeded 2 to 6 times per year in the past 3 years.

REGULATORY SETTINGS

Federal Regulations/Standards

Pursuant to the federal Clean Air Act (CAA) of 1970, the EPA established national ambient air quality standards (NAAQS). The NAAQS were established for six major pollutants, termed “criteria” pollutants. Criteria pollutants are defined as those pollutants for which the federal and State governments have established AAQS, or criteria, for outdoor concentrations in order to protect public health.

Data collected at permanent monitoring stations are used by the EPA to classify regions as “attainment” or “nonattainment,” depending on whether the regions met the requirements stated in the primary NAAQS. Nonattainment areas are imposed with additional restrictions as required by the EPA. The EPA has designated the SCAG as the Metropolitan Planning Organization (MPO) responsible for ensuring compliance with the requirements of the CAA for the Basin.

In an effort to help federal agencies ensure the integrity of their environmental reviews and promote sound governmental decision making, the Council on Environmental Quality (CEQ) issued on January 14, 2011, final guidance on the “Appropriate Use of Mitigation and Monitoring and Clarifying the Appropriate Use of Mitigated Findings of No Significant Impact.” This guidance was developed as part of CEQ’s effort to modernize and reinvigorate federal agency implementation of the National Environmental Policy Act (NEPA).

¹ United States Environmental Protection Agency Air Quality Data 2010–2012. EPA website; California Air Resources Board Air Quality Data 2010–2012. ARB website.

Table E: Ambient Air Quality Monitored in the Project Vicinity

Pollutant	Standard	2010	2011	2012
Carbon Monoxide (CO) – taken from Mission Viejo station				
Maximum 1-hr concentration (ppm)		1.2	1.4	1.5
Number of days exceeded:	State: > 20 ppm	0	0	0
	Federal: > 35 ppm	0	0	0
Maximum 8-hr concentration (ppm)		0.9	1.0	1.1
Number of days exceeded:	State: ≥ 9.0 ppm	0	0	0
	Federal: ≥ 9 ppm	0	0	0
Ozone (O₃) – taken from Mission Viejo station				
Maximum 1-hr concentration (ppm)		0.117	0.094	0.096
Number of days exceeded:	State: > 0.09 ppm	2	0	2
Maximum 8-hr concentration (ppm)		0.082	0.083	0.078
Number of days exceeded:	State: > 0.07 ppm	2	5	6
	Federal: > 0.075 ppm	2 ¹	2	1
Coarse Particulates (PM₁₀) – taken from Mission Viejo station				
Maximum 24-hr concentration (µg/m ³)		34.0	48.0	37.0
Number of days exceeded:	State: > 50 µg/m ³	0	0	0
	Federal: > 150 µg/m ³	0	0	0
Annual arithmetic average concentration (µg/m ³)		18.1	18.8	17.0
Exceeded for the year:	State: > 20 µg/m ³	No	No	No
Fine Particulates (PM_{2.5}) – taken from Mission Viejo station				
Maximum 24-hr concentration (µg/m ³)		19.9	33.4	27.6
Number of days exceeded:	Federal: > 35 µg/m ³	0 ²	0	0
Annual arithmetic average concentration (µg/m ³)		7.9	8.5	7.9
Exceeded for the year:	State: > 12 µg/m ³	No	No	No
	Federal: > 15 µg/m ³	No	No	No
Nitrogen Dioxide (NO₂) – taken from Costa Mesa station				
Maximum 1-hr concentration (ppm)		0.070	0.061	0.074
Number of days exceeded:	State: > 0.18 ppm	0	0	0
Annual arithmetic average concentration (ppm)		0.011	ND ³	0.010
Exceeded for the year:	State: > 0.030 ppm	No	ND	No
	Federal: > 0.053 ppm	No	ND	No
Sulfur Dioxide (SO₂) – taken from Costa Mesa station				
Maximum 24-hr concentration (ppm)		0.002	ND	ND
Number of days exceeded:	State: > 0.04 ppm	0	ND	ND
	Federal: > 0.14 ppm	0	ND	ND
Annual arithmetic average concentration (ppm)		0.000	ND	ND
Exceeded for the year:	Federal: > 0.030 ppm	NO	ND	ND

Sources: EPA and ARB websites: www.epa.gov/air/data/index.html and www.arb.ca.gov/adam/welcome.html (full 2012 data not yet available).

¹ The exceedances of the federal 8-hr O₃ standard are based on the old 0.08 ppm standard. In April 2008, the EPA revised the standard to 0.075 ppm.

² The exceedances of the federal 24-hour PM_{2.5} standard are based on the old 65 µg/m³ standard. In 2006, the EPA revised the standard to 35 µg/m³.

³ No data available.

ARB = California Air Resources Board

EPA = United States Environmental Protection Agency

hr = hour

µg/m³ = micrograms per cubic meter

PM₁₀ = particulate matter less than 10 microns in size

PM_{2.5} = particulate matter less than 2.5 microns in size

ppm = parts per million

The EPA established new national air quality standards for ground-level O₃ and fine particulate matter in 1997. On May 14, 1999, the Court of Appeals for the District of Columbia Circuit issued a decision ruling that the CAA, as applied in setting the new public health standards for O₃ and particulate matter, was unconstitutional as an improper delegation of legislative authority to the EPA. On February 27, 2001, the United States Supreme Court upheld the way the government sets air quality standards under the CAA. The court unanimously rejected industry arguments that the EPA must consider financial cost, as well as health benefits, in writing standards. The justices also rejected arguments that the EPA took too much lawmaking power from Congress when it set tougher standards for O₃ and soot in 1997. Nevertheless, the court threw out the EPA's policy for implementing new O₃ rules, saying that the agency ignored a section of the law that restricts its authority to enforce such rules.

In April 2003, the EPA was cleared by the White House Office of Management and Budget (OMB) to implement the 8-hour ground-level O₃ standard. The EPA issued the proposed rule implementing the 8-hour O₃ standard in April 2003. The EPA completed final 8-hour nonattainment status on April 15, 2004. The EPA revoked the 1-hour O₃ standard on June 15, 2005, and lowered the 8-hour O₃ standard from 0.08 ppm to 0.075 ppm on April 1, 2008.

The EPA issued the final PM_{2.5} implementation rule in fall 2004. The EPA lowered the 24-hour PM_{2.5} standard from 65 to 35 µg/m³ and revoked the annual PM₁₀ standard on December 17, 2006. The EPA issued final designations for the 2006 24-hour PM_{2.5} standard on December 12, 2008.

The United States has historically had a voluntary approach to reducing GHG emissions. However, on April 2, 2007, the United States Supreme Court ruled that the EPA has the authority to regulate CO₂ emissions under the CAA. While there currently are no adopted federal regulations for the control or reduction of GHG emissions, the EPA commenced several actions in 2009 that are required to implement a regulatory approach to GCC.

On September 30, 2009, the EPA announced a proposal that focuses on large facilities emitting over 25,000 tons of GHG emissions per year. These facilities would be required to obtain permits that would demonstrate they are using the best practices and technologies to minimize GHG emissions.

On December 7, 2009, the EPA Administrator signed a final action under the CAA, finding that six GHGs (CO₂, CH₄, N₂O, HFCs, PFCs, and SF₆) constitute a threat to public health and welfare, and that the combined emissions from motor vehicles cause and contribute to GCC. This EPA action does not impose any requirements on industry or other entities. However, the findings are a prerequisite to finalizing the GHG emission standards for light-duty vehicles mentioned below.

On April 1, 2010, the EPA and the Department of Transportation's National Highway Traffic Safety Administration (NHTSA) announced a final joint rule to establish a national program consisting of new standards for model year 2012 through 2016 light-duty vehicles that will reduce GHG emissions and improve fuel economy. The EPA is finalizing the first-ever national GHG emissions standards under the CAA, and NHTSA is finalizing Corporate Average Fuel Economy (CAFE) standards under the Energy Policy and Conservation Act. The EPA GHG standards require these vehicles to meet an estimated combined average emissions level of 250 grams of CO₂ per mile in model year 2016, equivalent to 35.5 miles per gallon (mpg).

State Regulations/Standards

In 1967, the California Legislature passed the Mulford-Carrell Act, which combined two Department of Health bureaus, the Bureau of Air Sanitation and the Motor Vehicle Pollution Control Board, to establish ARB. Since its formation, ARB has worked with the public, the business sector, and local governments to find solutions to California's air pollution problems.

The ARB identified particulate emissions from diesel-fueled engines (diesel particulate matter [DPM]) as TACs in August 1998. Following the identification process, ARB was required by law to determine whether there is a need for further control. In September 2000, the ARB adopted the Diesel Risk Reduction Plan (Diesel RRP), which recommends many control measures to reduce the risks associated with DPM and to achieve goals of 75 percent DPM reduction by 2010 and 85 percent by 2020.

From the 2010 Climate Action Team Report - California Climate Action Milestones. In 1988, AB 4420 directed the California Energy Commission (CEC) to report on "how global warming trends may affect California's energy supply and demand, economy, environment, agriculture, and water supplies" and offer "recommendations for avoiding, reducing and addressing the impacts." This marked the first statutory direction to a California State agency to address climate change.

The California Climate Action Registry was created to encourage voluntary reporting and early reductions of greenhouse gas emissions with the adoption of Senate Bill (SB) 1771 in 2000. The CEC was directed to assist by developing metrics and identifying and qualifying third-party organizations to provide technical assistance and advice to greenhouse gas emission reporters. The next year, SB 527 amended SB 1771 to emphasize third-party verification.

SB 1711 also contained several additional requirements for the CEC including: updating the State's greenhouse gas inventory from an existing 1998 report, and continuing to update it every 5 years; acquiring, developing and distributing information on global climate change to agencies and businesses; establishing a State interagency task force to ensure policy coordination; and establishing a climate change advisory committee to make recommendations on the most equitable and efficient ways to implement climate change requirements. In 2006, AB 1803 transferred preparation of the inventory from the CEC to the ARB by AB 1803. The ARB updates the inventory annually.

AB 1493, authored by Assembly Member Fran Pavley in 2002, directed the ARB to adopt regulations to achieve the maximum feasible and cost-effective reduction of greenhouse gas emissions from motor vehicles. The so-called "Pavley" regulations, or Clean Car regulations, were approved by the ARB in 2004. The ARB submitted a request to the EPA to implement the regulations in December 2005. After several years of requests to the federal government, and accompanying litigation, this waiver request was granted on June 30, 2009. The ARB has since combined the control of smog-causing pollutants and greenhouse gas emissions to develop a single coordinated package of standards known as Low Emission Vehicles III. It is expected that these regulations will reduce greenhouse gas emissions from California passenger vehicles by about 22 percent in 2012 and about 30 percent in 2016, all while improving fuel efficiency and reducing motorists' costs. AB 1493 also directed the California Climate Action Registry to adopt protocols for reporting reductions in greenhouse emissions from mobile sources prior to the operative date of the regulations.

SB 812 added forest management practices to the California Climate Action Registry members' reportable emissions actions. It also directed the Registry to adopt forestry procedures and protocols to monitor, estimate, calculate, report, and certify carbon stores and carbon dioxide emissions that resulted from the conservation and conservation-based management of forests in California.

The California Renewable Portfolio Standard Program, which requires electric utilities and other entities under the jurisdiction of the California Public Utilities Commission to meet 20 percent of their retail sales with renewable power by 2017, was established by SB 1078 in 2002. The renewable portfolio standard was accelerated to 20 percent by 2010 by SB 107 in 2006. The program was subsequently expanded by the renewable electricity standard approved by the ARB in September 2010, requiring all utilities to meet a 33 percent target by 2020. The renewable electricity standard is projected to reduce greenhouse gas emissions from the electricity sector by at least 12 MMT of CO₂e in 2020.

In December 2004, Governor Arnold Schwarzenegger signed Executive Order (EO) S-20-04, which set a goal of reducing energy use in State-owned buildings by 20 percent by 2015 (from a 2003 baseline) and encouraged cities, counties, schools, and the private sector to take all cost-effective measures to reduce building electricity use. This action built upon the State's strong history of energy efficiency efforts that have saved Californians and California businesses energy and money for decades. They are a cornerstone of greenhouse gas reduction efforts.

EO S-3-05 (June 2005) established greenhouse gas targets for the State such as: returning to year 2000 emission levels by 2010; 1990 levels by 2020; and 80 percent below 1990 levels by 2050. It directed the Secretary of the California Environmental Protection Agency to coordinate efforts to meet the targets with the heads of other State agencies. This group became the Climate Action Team.

California's Million Solar Roofs plan was boosted by the passage of SB 1 in 2006. The plan is estimated to result in 3,000 megawatts of new electricity generating capacity and avoidance of 2.1 MMT of CO₂e emissions. The main components of the bill included expanding the program to more customers, requiring the State's municipal utilities to create their own solar rebate programs, and making solar panels a standard option on new homes.

The California Global Warming Solutions Act of 2006, best known by its bill number AB 32, created a first-in-the country comprehensive program to achieve real, quantifiable, and cost-effective reductions in greenhouse gases. The law set an economy-wide cap on California greenhouse gas emissions at 1990 levels by 2020. It directed the ARB to prepare, approve, and implement a Scoping Plan for achieving the maximum technologically feasible and cost-effective reductions in greenhouse gas emissions. EO S-20-06, signed in October 2006, directed the Secretary for Environmental Protection to establish a Market Advisory Committee of national and international experts. The committee made recommendations to the ARB on the design of a market-based program for greenhouse gas emissions reduction. The ARB adopted the Scoping Plan, describing a portfolio of measures to achieve the target, in December 2008. All of the major regulatory measures necessary for meeting the 2020 emissions target were adopted by December 2010.

The governors of California, Arizona, New Mexico, Oregon, and Washington entered into a memorandum of understanding in February 2007 establishing the Western Climate Initiative. The

governors agreed to set a regional goal for emissions reductions consistent with state-by-state goals; develop a design for a regional market-based multi-sector mechanism to achieve the goal; and participate in a multi-state greenhouse gas registry. The Initiative has since grown to include Montana, Utah, and the Canadian provinces of British Columbia, Manitoba, Ontario, and Québec.

California is implementing the world's first Low Carbon Fuel Standard for transportation fuels, pursuant to both EO S-01-07, signed January 2007, and AB 32. The standard requires a reduction of at least 10 percent in the carbon intensity of California's transportation fuels by 2020. This reduction is expected to reduce greenhouse gas emissions in 2020 by 17.6 MMT of CO₂e. Also in 2007, AB 118 created the Alternative and Renewable Fuel and Vehicle Technology Program. The CEC and the ARB administer the program. This act provides funding for alternative fuel and vehicle technology research, development, and deployment in order to attain the State's climate change goals, achieve the State's petroleum reduction objectives and clean air and greenhouse gas emission reduction standards, develop public-private partnerships, and ensure a secure and reliable fuel supply.

In addition to vehicle emissions regulations and the low carbon fuel standard, the third effort reducing greenhouse gas emissions from transportation is the reduction in the demand for personal vehicle travel (i.e., vehicle miles traveled or VMT). This measure was addressed in September 2008 through the Sustainable Communities and Climate Protection Act of 2008, or SB 375. The enactment of SB 375 initiated an important new regional land use planning process to mitigate greenhouse gas emissions by integrating and aligning planning for housing, land use, and transportation for California's 18 Metropolitan Planning Organizations. The bill directed the ARB to set regional greenhouse gas emission reduction targets for most areas of the State. It also contained important elements related to federally mandated regional transportation plans and the alignment of State transportation and housing planning processes.

Also codified in 2008, SB 97 required the Governor's Office of Planning and Research to develop greenhouse gas emissions criteria to be used in determining project impacts under CEQA. These criteria were developed in 2009 and went into effect in 2010.

EO S-13-08 launched a major initiative for improving the State's adaptation to climate impacts from sea level rise, increased temperatures, shifting precipitation, and extreme weather events. It ordered a California Sea Level Rise Assessment Report to be requested from the National Academy of Sciences. It also ordered the development of a Climate Adaptation Strategy. The strategy, published in December 2009, assesses the State's vulnerability to climate change impacts, and outlines possible solutions that can be implemented within and across State agencies to promote resiliency. The Strategy focused on seven areas: public health, biodiversity and habitat, ocean and coastal resources, water management, agriculture, forestry, and transportation and energy infrastructure.

The initiatives, executive orders, and statutes outlined above comprise the major milestones in California's efforts to address climate change through coordinated action on climate research, greenhouse gas mitigation, and climate change adaptation. There are numerous other related efforts that have been undertaken by State agencies and departments to address specific questions and programmatic needs. The Climate Action Team coordinates these efforts and others which comprise the State's climate program. The rest of the report describes these efforts.

Regional Air Quality Planning Framework

The 1976 Lewis Air Quality Management Act established the SCAQMD and other air districts throughout the State. The federal CAA Amendments of 1977 required that each state adopt an implementation plan outlining pollution control measures to attain the federal standards in nonattainment areas of the State.

The ARB is responsible for incorporating air quality management plans for local air basins into a State Implementation Plan (SIP) for EPA approval. Significant authority for air quality control within them has been given to local air districts that regulate stationary-source emissions and develop local nonattainment plans.

Regional Air Quality Management Plan

The SCAQMD and the SCAG are responsible for formulating and implementing the AQMP for the Basin. The main purpose of an AQMP is to bring the area into compliance with federal and State air quality standards. Every 3 years, the SCAQMD prepares a new AQMP, updating the previous plan and having a 20-year horizon. The SCAQMD adopted the 2012 AQMP in December 2012 and forwarded it to ARB for review and approval.

The 2012 AQMP incorporated the latest scientific and technological information and planning assumptions, including the 2012 Regional Transportation Plan/Sustainable Communities Strategy and updated emission inventory methodologies for various source categories. The 2012 AQMP included the new and changing federal requirements, implementation of new technology measures, and the continued development of economically sound, flexible compliance approaches.

Local Regulations/Standards

The City of Lake Forest does not have any plans, policies, regulations, significance thresholds, or laws addressing climate change at this time. The General Plan states that energy requirements can be diminished through innovative architectural design, building construction, structural orientation, and landscaping. The Recreation and Resources Element of the General Plan includes goals and policies addressing energy conservation. The City has established ECONomic, which is a voluntary green home education program. The City, through ECONomic, encourages homeowners and building professionals to incorporate green building design into construction projects. The City also promotes utility company incentive programs to retrofit existing development with energy efficient lighting, and air conditioning and heating systems to reduce energy consumption.

The City of Lake Forest published their CEQA Significance Thresholds Guide on November 20, 2001, and a revision in March 2009 as an internal guidance document for City staff. It is consistent with the SCAQMD CEQA significance thresholds. The City's General Plan does not have any Climate Change/Greenhouse Gas specific content. The City also published "Local Guidelines for Implementing the California Environmental Quality Act" in June 2012. Pertinent to climate change impacts, the guidelines state that:

The City shall analyze the greenhouse gas emissions of its projects as required in *State CEQA Guidelines* Section 15064.4. For projects subject to CEQA, the City should make a good faith effort, based to the extent possible on scientific and factual data, to describe, calculate, or estimate the amount of greenhouse gas emissions resulting from a project.

Once the magnitude of a project's emissions have been described, estimated, or calculated, the City should consider the following factors, among others, to determine whether those emissions are significant:

- (1) The extent to which the project may increase or reduce greenhouse gas emissions as compared to the baseline. Physical environmental conditions in the vicinity of the project, as they exist at the time the Notice of Preparation is published or the time when the environmental analysis is commenced, will normally constitute the baseline. All project phases, including construction and operation, should be considered in determining whether a project will cause emissions to increase or decrease as compared to the baseline;
- (2) Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project. Lead agencies may rely on thresholds of significance developed by experts or other agencies provided that application of the threshold and the significance conclusion is supported with substantial evidence. When relying on thresholds developed by other agencies, lead agencies should ensure that the threshold is appropriate for the project and the project's location; and
- (3) The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. Such requirements must be adopted by the relevant public agency through a public review process and must reduce or mitigate the project's incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an Environmental Impact Report (EIR) must be prepared for the project.

Additional guidance on the determination of significance is available in the Natural Resources Agency's Final Statement of Reasons prepared for the Amendments to the State CEQA Guidelines Addressing Analysis and Mitigation of Greenhouse Gas Emissions Pursuant to SB 97 (December 2009).

When an EIR is prepared, it must discuss any inconsistencies between the proposed project and any applicable general plan, specific plans, and regional plans. This includes, but is not limited to, any applicable air quality attainment plans, regional blueprint plans, or plans for the reduction of greenhouse gas emissions.

Lead agencies must consider feasible means of mitigating the significant effects of greenhouse gas emissions. Any such mitigation measure must be supported by substantial evidence and be subject to monitoring or reporting. Potential mitigation will depend on the particular circumstances of the project, but may include the following, among others:

- (1) Measures in an existing plan or mitigation program for the reduction of emissions that are required as part of the lead agency's decision;
- (2) Reductions in emissions resulting from a project through implementation of project features, project design, or other measures, such as those described in *State CEQA Guidelines* Appendix F;
- (3) Off-site measures, including offsets that are not otherwise required, to mitigate a project's emissions; and
- (4) Measures that sequester greenhouse gases.

THRESHOLDS OF SIGNIFICANCE

A number of modeling tools are available to assess air quality impacts of projects. In addition, certain air districts, such as the SCAQMD, have created guidelines and requirements to conduct air quality analysis. SCAQMD's current guidelines, *CEQA Air Quality Handbook* (April 1993) with associated updates, and the City of Lake Forest were adhered to in the assessment of air quality impacts for the proposed project. The air quality models identified in the document (including an older version of the URBEMIS model) are outdated; therefore, the current model, CalEEMod Version 2013.2, was used to estimate project-related mobile- and stationary-source emissions in this Air Quality Analysis.

The Air Quality Analysis includes estimated emissions associated with short-term construction and long-term operation of the proposed project. Criteria pollutants with regional impacts would be emitted by project-related vehicular trips, as well as by emissions associated with stationary sources used on site. Localized air quality impacts, i.e., higher CO concentrations (CO hot spots) near intersections or roadway segments in the project vicinity, would be small and less than significant due to the generally low ambient CO concentrations (maximum 1.5 ppm for the 1-hour period and 1.1 ppm for the 8-hour period) in the project area.

The net increase in pollutant emissions determines the significance and impact on regional air quality as a result of the proposed project. The results also allow the local government to determine whether the proposed project will deter the region from achieving the goal of reducing pollutants in accordance with the AQMP in order to comply with federal and State AAQS.

STATE THRESHOLDS OF SIGNIFICANCE

Based on *Guidelines for the Implementation of California Environmental Quality Act*, Appendix G, Public Resource Code (PRC) Sections 15000–15387, a project would normally be considered to have a significant effect on air quality if the project would violate any ambient air quality standards, contribute substantially to an existing air quality violation, expose sensitive receptors to substantial pollutants concentrations, or conflict with adopted environmental plans and goals of the community in which it is located.

REGIONAL THRESHOLDS OF SIGNIFICANCE

In addition to the federal and State AAQS, there are daily emissions thresholds for construction and operation of a proposed project in the Basin. The Basin is administered by the SCAQMD, and guidelines and emissions thresholds established by the SCAQMD. It should be noted that the emissions thresholds were established based on the attainment status of the air basin in regard to air quality standards for specific criteria pollutants. Because the concentration standards were set at a level that protects public health with an adequate margin of safety (EPA), these emissions thresholds are regarded as conservative and would overstate an individual project's contribution to health risks.

Regional Thresholds for Construction Emissions

The following CEQA significance thresholds for construction emissions have been established for the Basin:

- 75 pounds per day (lbs/day) of ROC
- 100 lbs/day of NO_x
- 550 lbs/day of CO
- 150 lbs/day of PM₁₀
- 55 lbs/day of PM_{2.5}
- 150 lbs/day of SO_x

Projects in the Basin with construction-related emissions that exceed any of these emission thresholds are considered to be significant under the SCAQMD guidelines.

Regional Thresholds for Operational Emissions

The following CEQA significance thresholds for operational emissions have been established for the Basin:

- 55 lbs/day of ROC
- 55 lbs/day of NO_x
- 550 lbs/day of CO
- 150 lbs/day of PM₁₀
- 55 lbs/day of PM_{2.5}
- 150 lbs/day of SO_x

Projects in the Basin with operational emissions that exceed any of these emission thresholds are considered to be significant under the SCAQMD guidelines.

Local Microscale Concentration Standards. The significance of localized project impacts under CEQA depends on whether ambient CO levels in the vicinity of the project are above or below State and federal CO standards. If ambient levels are below the standards, a project is considered to have a significant impact if project emissions result in an exceedance of one or more of these standards. If ambient levels already exceed a State or federal standard, project emissions are considered significant if they increase 1-hour CO concentrations by 1.0 ppm or more or 8-hour CO concentrations by 0.45 ppm or more. The following are applicable local emission concentration standards for CO:

- California State 1-hour CO standard of 20.0 ppm
- California State 8-hour CO standard of 9.0 ppm

THRESHOLDS FOR LOCALIZED IMPACTS ANALYSIS

The SCAQMD published its *Final Localized Significance Threshold Methodology* in June 2003, recommending that all air quality analyses include an assessment of both construction and operational impacts on the air quality of nearby sensitive receptors. Localized Significance Thresholds (LSTs) represent the maximum emissions from a project site that are not expected to result in an exceedance of the national or State AAQS, as previously shown in Table A. LSTs are based on the ambient concentrations of that pollutant within the project Source Receptor Area (SRA) and the distance to the nearest sensitive receptor. For this project, the appropriate SRA for the localized impacts analysis is the Saddleback Valley area (SRA 19).

In the case of CO and NO₂, if ambient levels are below the standards, a project is considered to have a significant impact if project emissions result in an exceedance of one or more of the national or State AAQS. If ambient levels already exceed a State or federal standard, then project emissions are considered significant if they increase ambient concentrations by a measurable amount. This would apply to PM₁₀ and PM_{2.5}, both of which are nonattainment pollutants. For these two, the significance criteria are the pollutant concentration thresholds presented in SCAQMD Rules 403 and 1301. The Rule 403 threshold of 10.4 µg/m³ applies to construction emissions. The Rule 1301 threshold of 2.5 µg/m³ applies to operational activities.

To avoid the need for every air quality analysis to perform air dispersion modeling, the SCAQMD performed air dispersion modeling for a range of construction sites less than or equal to 5 acres (ac) in size and created look-up tables that correlate pollutant emissions rates with project size to screen out projects that are unlikely to generate enough emissions to result in a locally significant concentration of any criteria pollutant. These look-up tables can also be used as screening criteria for larger projects to determine whether or not dispersion modeling may be required.

For construction and operational emissions, the localized significance for a project greater than 5 ac can be determined by performing the screening-level analysis using the 5 ac LSTs before using the dispersion modeling because the screening-level analysis is more conservative, and if no exceedance of the screening-level thresholds is identified, then the chance of local concentration exceeding national or State AAQS is small. Since the total gross area for the project site is larger than 5 ac, the LST screening thresholds for 5 ac are used in this analysis for construction emissions.

Sensitive receptors include residences, schools, hospitals, and similar uses that are sensitive to adverse air quality. Existing residences nearest to the project site are approximately 1,500 ft from the project site. Using interpolation, the operations LST thresholds for receptors at 457 meters (m) from a 5 ac site for this project would result in a conservative analysis. Therefore, the following emissions thresholds apply during project operations:

- **Construction Localized Significance Thresholds, 5 acres, 1,500 ft distance**
 - 270 lbs/day of NO_x
 - 9,630 lbs/day of CO

- 137 lbs/day of PM₁₀
- 81 lbs/day of PM_{2.5}
- **Operations Localized Significance Thresholds, 5 acres, 1,500 ft distance**
 - 270 lbs/day of NO_x
 - 9,630 lbs/day of CO
 - 33 lbs/day of PM₁₀
 - 20 lbs/day of PM_{2.5}

THRESHOLDS FOR GLOBAL CLIMATE CHANGE

CEQA Guidelines Section 15064(b) provides that the “determination of whether a project may have a significant effect on the environment calls for careful judgment on the part of the public agency involved, based to the extent possible on scientific and factual data,” and further, states that an “ironclad definition of significant effect is not always possible because the significance of an activity may vary with the setting.”

Appendix G of the CEQA Guidelines includes the following sample questions related to GCC that are intended to encourage thoughtful assessment of impacts, and do not necessarily represent thresholds of significance:

- Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?
- Would the project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs?

However, despite this, currently neither the CEQA statutes nor any applicable guidelines prescribe thresholds of significance or a particular methodology for performing an impact analysis. As with most environmental topics, significance criteria are left to the judgment and discretion of the lead agency.

The SCAQMD has not adopted a significance threshold for GHG emissions for development projects¹ or a methodology for quantifying GHG emissions. However, the current draft thresholds released by SCAQMD for discussion purposes in September of 2010 include the option of using an efficiency metric based on the metric tons (MT) of GHG emissions per year per “service population.” Service population is defined as the sum of the residential population and employees; a development’s GHG emissions are divided by the service population to yield a GHG efficiency metric that is presented in terms of “metric tons of CO₂e per service population per year” (MT/SP/YR) figure.

¹ SCAQMD adopted a significance threshold for industrial sources of 10,000 metric tons of CO₂e per year on December 5, 2008.

This report will use the SCAQMD's draft efficiency metric of 4.8 MT/SP/YR to make its significance determinations. Finally, since no threshold of significance has been adopted for construction GHG emissions, consistent with methods used by the SCAQMD in their draft guidelines, the one-time construction and vegetation change GHG emissions are annualized, added to the operational GHG emissions, and the total compared to the SCAQMD's draft efficiency metric.¹

¹ This approach to one-time construction and vegetation change GHG emissions is based on the GHG Threshold Working Group Meeting No. 13 Minutes from August 26, 2009. Available at: <http://www.aqmd.gov/ceqa/handbook/GHG/2009/aug26mtg/wkgrp13minutes.pdf>.

IMPACTS AND MITIGATION

Air pollutant emissions associated with the project would occur over the short term from construction activities, such as fugitive dust from site preparation and grading, and emissions from equipment exhaust. There would be long-term regional emissions associated with project-related vehicular trips and due to energy consumption such as electricity usage by the proposed land uses.

CONSTRUCTION IMPACTS

Equipment Exhausts and Related Construction Activities

Construction activities produce combustion emissions from various sources such as grading, site preparation, utility engines, tenant improvements, and motor vehicles transporting the construction crew. Exhaust emissions from construction activities envisioned on site would vary daily as construction activity levels change. The use of construction equipment on site would result in localized exhaust emissions. Table F lists the tentative project construction schedule, based on a probable start date, a planned opening in 2017, and the assumption that the architectural coatings would be applied during the latter portion of the building construction phase. Table G lists the potential construction equipment to be used during project construction.

Table F: Tentative Project Construction Schedule

Phase Number	Phase Name	Phase Start Date	Phase End Date	Number of Days/Week	Number of Days
1	Demolition	01/01/2015	01/28/2015	5	20
2	Site Preparation	01/29/2015	02/25/2015	5	20
3	Grading	02/26/2015	04/29/2015	5	45
4	Building Construction	04/30/2015	4/30/2017	5	522
5	Paving	5/1/2017	6/16/2017	5	35
6	Architectural Coating	1/2/2016	4/30/2017	5	345

Source: Schedule estimated from site plan, assuming architectural coatings will be applied during building construction phase and a 2017 opening year.

Table G: Diesel Construction Equipment Utilized by Construction Phase

Construction Phase	Off-Road Equipment Type	Off-Road Equipment Unit Amount	Hours Used per Day	Horsepower	Load Factor
Demolition	Concrete/Industrial Saws	1	8	81	0.73
	Excavators	3	8	162	0.38
	Rubber Tired Dozers	2	8	255	0.40
Site Preparation	Rubber Tired Dozers	3	8	255	0.4
	Tractors/Loaders/Backhoes	4	8	97	0.37
	Excavators	2	8	162	0.38
Grading	Graders	1	8	174	0.41
	Rubber Tired Dozers	1	8	255	0.4
	Tractors/Loaders/Backhoes	2	8	97	0.37
	Scrapers	2	8	361	0.48
	Cranes	1	7	226	0.29
Building Construction	Forklifts	3	8	89	0.2
	Generator Sets	1	8	84	0.74
	Tractors/Loaders/Backhoes	3	7	97	0.37
	Welders	1	8	46	0.45
	Air Compressors	1	6	78	0.48
Architectural Coating	Pavers	2	8	125	0.42
Paving	Paving Equipment	2	8	130	0.36
	Rollers	2	8	80	0.38

Source: CalEEMod Defaults.

The most recent version of the CalEEMod model (Version 2013.2.2) was used to calculate the construction emissions, as shown in Table H. The emissions rates shown are from the CalEEMod output tables listed as “Mitigated Construction,” even though the only measures that have been applied to the analysis are the required construction emissions control measures, or standard conditions. They are also the combination of the on- and off-site emissions.

Since no exceedances of any criteria pollutants are expected, no significant impacts would occur for project construction. Standard measures are discussed in Section 5.6. Details of the emission factors and other assumptions are included in Appendix A.

Fugitive Dust

Fugitive dust emissions are generally associated with land clearing and exposure of soils to the air and wind, as well as cut-and-fill grading operations. Dust generated during construction varies substantially on a project-by-project basis, depending on the level of activity, the specific operations, and weather conditions at the time of construction. The proposed project will be required to comply with SCAQMD Rules 402 and 403 to control fugitive dust.

Table H: Short-Term Regional Construction Emissions

Construction Phase	Total Regional Pollutant Emissions (lbs/day)							
	VOC	NO _x	CO	SO _x	Fugitive PM ₁₀	Exhaust PM ₁₀	Fugitive PM _{2.5}	Exhaust PM _{2.5}
Demolition	4.7	50	38	0.045	0.63	2.5	0.12	2.3
Site Preparation	6.6	77	59	0.088	8.4	3.4	4.2	3.2
Grading	7.9	95	64	0.1	4.5	4.1	1.7	3.7
Building Construction	4.4	33	28	0.045	1.2	2.2	0.31	2
Architectural Coating	11	2.5	3.1	0.0055	0.2	0.2	0.053	0.2
Paving	2	20	16	0.024	0.17	1.1	0.045	1
Peak Daily Emissions	15	95	64	0.1	12		7.4	
SCAQMD Thresholds	75	100	550	150	150		55	
Significant Emissions?	No	No	No	No	No		No	

Source: LSA Associates, Inc. (November 2013).

Note: Peak daily emissions are based on a worst-case assumption that the Building Construction and Architectural Coating phases would overlap.

CO = carbon monoxide

CO₂ = carbon dioxideCO_{2e} = carbon dioxide equivalent

lbs/day = pounds per day

NO_x = nitrogen oxidesPM_{2.5} = particulate matter less than 2.5 microns in sizePM₁₀ = particulate matter less than 10 microns in size

SCAQMD = South Coast Air Quality Management District

SO_x = sulfur oxides

VOC = volatile organic compound

Table H lists total construction emissions (i.e., fugitive-dust emissions and construction-equipment exhausts) that have incorporated a number of feasible control measures that can be reasonably implemented to significantly reduce PM₁₀ emissions from construction.

Architectural Coatings

Architectural coatings contain VOCs that are similar to ROCs and are part of the O₃ precursors. Based on the proposed project, it is estimated that application of the architectural coatings for the proposed peak construction day will result in a combined peak of 15 lbs/day of VOC. Therefore, this VOC emission will not exceed the SCAQMD VOC threshold of 75 lbs/day.

Localized Impact Analysis

The SCAQMD has issued guidance on applying CalEEMod modeling results to localized impact analyses.¹ Sensitive receptors include residences, schools, hospitals, and similar uses that are sensitive to adverse air quality. There are existing residential uses approximately 1,500 ft (450 m) from the project site along El Toro Road. Table I shows that the emissions of the pollutants on the peak day of construction will result in concentrations of pollutants at these nearest residences that are all below the SCAQMD thresholds of significance.

¹ From the SCAQMD website, www.aqmd.gov/ceqa/handbook/1st/CalEEModguidance.pdf.

Table I: Construction Localized Impacts Analysis

Emissions Sources	NO _x	CO	PM ₁₀	PM _{2.5}
On-site Emissions	79	51	10.2	6.7
Localized Significance Thresholds	270	9,630	137	81
Significant Emissions?	No	No	No	No

Source: LSA Associates, Inc. (November 2013).

SRA: Saddleback Valley, 5 acre LSTs, 1,500 foot distance for sensitive receptors

Note: LSTs interpolated from SCAQMD provided thresholds.

CO = carbon monoxide

NO_x = nitrogen oxides

lbs/day = pounds per day

PM_{2.5} = particulate matter less than 2.5 microns in size

LST = localized significance threshold

PM₁₀ = particulate matter less than 10 microns in size

Odors

Heavy-duty equipment in the project area during construction would emit odors, primarily from the equipment exhaust. However, the construction activity would cease to occur after individual construction is completed. No other sources of objectionable odors have been identified for the proposed project, and no mitigation measures are required.

SCAQMD Rule 402 regarding nuisances states: “A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property.” The proposed uses are not anticipated to emit any objectionable odors. Therefore, objectionable odors posing a health risk to potential on-site and existing off-site uses would not occur as a result of the proposed project.

Naturally Occurring Asbestos

The proposed project is located in Orange County, which is not among the counties that are found to have serpentine and ultramafic rock in their soils.¹ Therefore, the potential risk for NOA during project construction is small and less than significant.

Construction Emissions Conclusions

Table H shows that daily regional construction emissions would not exceed the daily thresholds of any criteria pollutant emission thresholds established by the SCAQMD. Table I shows that during construction, there will be no locally significant impacts.

¹ California Department of Conservation, http://www.conservation.ca.gov/cgs/minerals/hazardous_minerals/asbestos/Pages/index.aspx.

LONG-TERM REGIONAL AIR QUALITY IMPACTS

Long-Term Project Operational Emissions

Long-term air pollutant emission impacts are those associated with stationary sources and mobile sources involving any project-related changes. The proposed project would result in net increases in both stationary- and mobile-source emissions. The stationary-source emissions would come from many sources, including the use of consumer products, landscape equipment, general energy, and solid waste.

In order to determine the project-related change to the existing air pollutant emissions, the existing condition was modeled in CalEEMod as a 50,000 sf nursery with 1,030 daily vehicle trips, using 640,000 kilowatt hour (kWh)/yr of electricity, 102,500 thousand British Thermal Units (kBtu)/yr of natural gas, 5.9 million gallons (Mgal)/yr of water, and producing 554 tons/yr of waste.¹

Based on trip generation factors included in the Institute of Transportation Engineers (ITE) *Trip Generation Manual, Eighth Edition*, which are also provided in the traffic study prepared for the proposed project (RBF Consulting, Inc., October 2013), the project's daily trips are entered in the CalEEMod model; long-term operational emissions associated with the proposed project, are shown in Tables J (2017) and K (2030). 2017 is the planned opening year for the proposed project, and 2030 is the Baker Ranch Planned Community Text build-out year. This analysis compares the existing operations with the proposed project in 2017 and the Baker Ranch Planned Community Text land use of 341,499 sf of commercial development compared to the proposed project in 2030.

Area sources include architectural coatings, consumer products, hearth, and landscaping. Energy sources include natural gas consumption for heating and cooking. Table J also shows the emissions associated with the existing yard uses because the proposed project would replace the existing yard uses. Table J shows that the increase of all criteria pollutants as a result of the proposed project would not exceed the corresponding SCAQMD daily emission thresholds for any criteria pollutants. However, even if the existing yard uses continue, emissions from the proposed project would remain below the SCAQMD emission thresholds for all criteria pollutants. In 2030, if the proposed project is not implemented, the project site would be developed into a commercial project. Therefore, Table K shows the 2030 the Baker Ranch Planned Community Text land use of 341,499 sf of commercial development (without project) and the proposed project scenario, and compares the difference in emissions. None of the SCAQMD emission thresholds for criteria pollutants would be exceeded by the project-related net increases. Therefore, project-related long-term air quality impacts would be less than significant.

¹ Operational values from the project traffic study and defaults built into CalEEMod for the most similar retail land use, a hardware/paint store.

Table J: 2017 Regional Operational Emissions

Source	Pollutant Emissions (lbs/day)					
	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Existing Yard Uses						
Area Sources	1.3	0.00005	0.0052	0	0.00002	0.00002
Energy Sources	0.003	0.028	0.023	0.00017	0.0021	0.0021
Mobile Sources	3.2	6.5	27	0.059	3.9	1.1
Total Yard Uses Emissions	4.5	6.5	27	0.059	3.9	1.1
Proposed Residences						
Area Sources	11	0.24	21	0.0011	0.45	0.44
Energy Sources	0.21	1.8	0.78	0.012	0.15	0.15
Mobile Sources	9.2	27	110	0.27	19	5.2
Total Project Emissions	20	29	130	0.28	20	5.8
Net Change	16	23	103	0.221	16	4.7
SCAQMD Thresholds	55	55	550	150	150	55
Significant?	No	No	No	No	No	No

Source: LSA Associates, Inc. (November 2013).

CO = carbon monoxide

CO₂ = carbon dioxide

lbs/day = pounds per day

NO_x = nitrogen oxides

PM_{2.5} = particulate matter less than 2.5 microns in size

PM₁₀ = particulate matter less than 10 microns in size

SCAQMD = South Coast Air Quality Management

District

SO_x = sulfur oxides

VOC = volatile organic compound

Table K: 2030 Regional Operational Emissions

Source	Pollutant Emissions (lbs/day)					
	VOC	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Baker Ranch Planned Community Text Land Use of 341,499 sf of Commercial Development						
Area Sources	8.9	0.00031	0.035	0	0.00012	0.00012
Energy Sources	0.021	0.19	0.16	0.0011	0.014	0.014
Mobile Sources	29	56	270	1	68	19
Total Commercial Development Emissions	38	56	270	1	68	19
Proposed Residences						
Area Sources	11	0.24	21	0.0011	0.45	0.45
Energy Sources	0.21	1.8	0.78	0.012	0.15	0.15
Mobile Sources	5.6	14	62	0.28	19	5.2
Total Project Emissions	17	16	84	0.29	20	5.8
Net Change	-21.1	-40	-186	-0.71	-48	-13.2
SCAQMD Thresholds	55	55	550	150	150	55
Significant?	No	No	No	No	No	No

Source: LSA Associates, Inc. (October 2013).

CO = carbon monoxide

CO₂ = carbon dioxide

lbs/day = pounds per day

NO_x = nitrogen oxides

PM_{2.5} = particulate matter less than 2.5 microns in size

PM₁₀ = particulate matter less than 10 microns in size

SCAQMD = South Coast Air Quality Management

District

SO_x = sulfur oxides

VOC = volatile organic compound

Localized Impacts Analysis

Table L shows the calculated emissions for the proposed operational activities compared with the appropriate LSTs. By design, the localized impacts analysis only includes on-site sources; however, the CalEEMod model outputs do not separate on-site and off-site emissions for mobile sources. For a worst-case scenario assessment, the emissions shown in Table L include all on-site project-related stationary sources and 5 percent of the project-related new mobile sources, which is an estimate of the amount of project-related new vehicle traffic that will occur on site. A total of 5 percent is considered conservative as the average trip lengths assumed are 14.7 miles for home to work, 5.9 miles for home to shopping, and 8.7 miles for other types of trips. It is unlikely that the average on-site distance driven will be even 1,000 ft, which is approximately 2.2 percent of the total miles traveled. Considering the total trip length included in the CalEEMod model, the 5 percent assumption is conservative.

Table L: Operational Localized Impacts Analysis

Emissions Sources	NO _x	CO	PM ₁₀	PM _{2.5}
On-site Emissions (lbs/day)	1.6	27	1.4	0.70
Localized Significance Thresholds	270	9,630	33	20
Significant Emissions?	No	No	No	No

Source: LSA Associates, Inc. (November 2013).

SRA: Saddleback Valley, 5 acre LSTs, 1,500 foot distance for sensitive receptors, on-site traffic 5 percent of total. Note: LSTs interpolated from SCAQMD provided thresholds.

CO = carbon monoxide

PM_{2.5} = particulate matter less than 2.5 microns in size

lbs/day = pounds per day

PM₁₀ = particulate matter less than 10 microns in size

LST = localized significance threshold

SRA = Source Receptor Area

NO_x = nitrogen oxides

Table L shows that the operational emission rates would not exceed the LSTs for receptors at 450 m. Therefore, the proposed operational activity would not result in a locally significant air quality impact.

Health Risk Level

Based on the project's conceptual site plan (Bassenian/Lagoni Architecture Planning Interiors, September 3, 2013), there are single-family dwelling units proposed near to the SR-241 and Portola Parkway. Along Portola Parkway, frontline home lots are as close as 140 ft from the roadway centerline. Along SR-241, frontline home lots are as close as 130 ft from the toll road centerline. The traffic study and the California Department of Transportation (Caltrans) data project that the average daily trips (ADT) on these roadways will be 48,600 and 121,100 in 2030 on Portola Parkway and SR-241, respectively. Current Caltrans data show that the percentage of trucks on SR-241 is approximately 3 percent. It is unknown what the truck percentage is on Portola Parkway, but as it is not a major truck route, it is likely that the percentage is very low also.

The Office of Environmental Health and Hazards Assessment (OEHHA) has determined that long-term exposure to diesel exhaust particulates poses the highest cancer risk of any TAC it has evaluated. Exposure to diesel exhaust can also have immediate health effects. Diesel exhaust can irritate the eyes, nose, throat, and lungs, and it can cause coughs, headaches, lightheadedness, and nausea. In studies with human volunteers, diesel exhaust particles made people with allergies more susceptible to the materials to which they are allergic, such as dust and pollen. Exposure to diesel exhaust also causes inflammation in the lungs, which may aggravate chronic respiratory symptoms and increase the frequency or intensity of asthma attacks.

Fortunately, improvements to diesel fuel and diesel engines have substantially reduced emissions of these contaminants. These improvements have already resulted in a 75 percent reduction in particle emissions from diesel-powered trucks and other equipment (as compared to 2000 levels), and by 2020, when fully implemented, they will result in an 85 percent reduction.¹ These improvements are anticipated to continue into the foreseeable future.

Thus, as the existing truck percentages are so low and the emissions reduction measures are so successful, it is not expected that there will be a significant health risk impact from nearby vehicle traffic to the future residents of the proposed project.

Greenhouse Gas Emissions

This section evaluates potential significant impacts to GCC that could result from implementation of the proposed project. Because it is not possible to tie specific GHG emissions to actual changes in climate, this evaluation focuses on the project's emission of GHGs. Mitigation measures are identified as appropriate.

GHG Emissions Background. Emissions estimates for the proposed project are discussed below. GHG emissions estimates are provided herein for informational purposes only, as there is no established quantified GHG emissions threshold. Bearing in mind that CEQA does not require "perfection" but instead "adequacy, completeness, and a good faith effort at full disclosure," the analysis below is based on methodologies and information available to the City and the applicant at the time this analysis was prepared. Estimation of GHG emissions in the future does not account for all changes in technology that may reduce such emissions; therefore, the estimates are based on past performance and represent a scenario that is worse than that which is likely to be encountered (after energy-efficient technologies have been implemented). While information is presented below to assist the public and decision-makers in understanding the project's potential contribution to GCC impacts, the information available to the cities is not sufficiently detailed to allow a direct comparison between particular project characteristics and particular climate change impacts, nor between any particular proposed mitigation measure and any reduction in climate change impacts.

Construction and operation of project development would generate GHG emissions, with the majority of energy consumption (and associated generation of GHG emissions) occurring during the project's

¹ Cal EPA OEHHA and American Lung Association of California, 2002. *Health Effects of Diesel Exhaust*. April.

operation (as opposed to during its construction). Typically, more than 80 percent of the total energy consumption takes place during the use of buildings, and less than 20 percent of energy is consumed during construction.¹ As of yet, there is no study that quantitatively assesses all of the GHG emissions associated with each phase of the construction and use of an individual development.

Overall, the following activities associated with the proposed project could directly or indirectly contribute to the generation of GHG emissions:

- **Construction Activities:** During construction of the project, GHGs would be emitted through the operation of construction equipment and from worker and vendor vehicles, each of which typically uses fossil-based fuels to operate. The combustion of fossil-based fuels creates GHGs such as CO₂, CH₄, and N₂O. Furthermore, CH₄ is emitted during the fueling of heavy equipment.
- **Gas, Electricity, and Water Use:** Natural gas use results in the emission of two GHGs: CH₄ (the major component of natural gas) and CO₂ (from the combustion of natural gas). Electricity use can result in GHG production if the electricity is generated by combusting fossil fuel. California's water conveyance system is energy-intensive. Preliminary estimates indicate that the total energy used to pump and treat this water exceeds 6.5 percent of the total electricity used in the State per year.²
- **Solid Waste Disposal:** Solid waste generated by the project could contribute to GHG emissions in a variety of ways. Landfilling and other methods of disposal use energy for transporting and managing the waste, and they produce additional GHGs to varying degrees. Landfilling, the most common waste management practice, results in the release of CH₄ from the anaerobic decomposition of organic materials. CH₄ is 25 times more potent a GHG than CO₂. However, landfill CH₄ can also be a source of energy. In addition, many materials in landfills do not decompose fully, and the carbon that remains is sequestered in the landfill and not released into the atmosphere.
- **Motor Vehicle Use:** Transportation associated with the proposed project would result in GHG emissions from the combustion of fossil fuels in daily automobile and truck trips.

GHG emissions associated with the project would occur over the short term from construction activities and would consist primarily of emissions from equipment exhaust. There would also be long-term regional emissions associated with project-related new vehicular trips and stationary-source emissions, such as natural gas used for heating and electricity usage for lighting. Preliminary guidance from OPR and recent letters from the Attorney General critical of CEQA documents that have taken different approaches indicate that lead agencies should calculate, or estimate, emissions from vehicular traffic, energy consumption, water conveyance and treatment, waste generation, and construction activities. The calculation presented below includes construction emissions in terms of CO₂ and annual CO₂e GHG emissions from increased energy consumption, water usage, solid waste disposal, and estimated GHG emissions from vehicular traffic that would result from implementation of the project.

¹ United Nations Environment Programme (UNEP), 2007. *Buildings and Climate Change: Status, Challenges and Opportunities*, Paris, France.

² CEC, 2004. *Water Energy Use in California* (online information sheet) Sacramento, CA, August 24. Website: energy.ca.gov/pier/iaw/industry/water.html (accessed July 24, 2007).

GHG emissions generated by the proposed project would predominantly consist of CO₂. In comparison to criteria air pollutants such as O₃ and PM₁₀, CO₂ emissions persist in the atmosphere for a substantially longer period of time. While emissions of other GHGs, such as CH₄, are important with respect to GCC, emission levels of other GHGs are less dependent on the land use and circulation patterns associated with the proposed land use development project than are levels of CO₂.

Construction activities produce combustion emissions from various sources, such as site grading, utility engines, on-site heavy-duty construction vehicles, equipment hauling materials to and from the site, asphalt paving, and motor vehicles transporting the construction crew. Exhaust emissions from on-site construction activities would vary daily as construction activity levels change.

Table M lists the annual CO₂ emissions for the single highest year of each of the planned construction phases. In other words, the multi-year building construction phase will emit 510 MT of CO₂e during the peak year and something less for the other years of building construction.

Table M: Short-Term Regional Construction Emissions

Construction Phase	Total Regional Pollutant Emissions (MT/year)			
	CO ₂	CH ₄	N ₂ O	CO ₂ e
Demolition	42	0.01	0	42
Site Preparation	80	0.012	0	80
Grading	210	0.04	0	210
Building Construction	510	0.085	0	510
Architectural Coating	57	0.0052	0	57
Paving	39	0.011	0	39

Source: LSA Associates, Inc. (November 2013).

Note: Total construction GHG emissions=1,470 MT CO₂e.

CH₄ = methane

MT/year = metric tons per year

CO₂ = carbon dioxide

N₂O = nitrous oxide

CO₂e = carbon dioxide equivalent

Total construction GHG emissions over the multi-year construction period are estimated to be 1,470 MT of CO₂e. See the CalEEMod modeling output in Appendix A for details.

Architectural coatings used in construction of the project may contain VOCs that are similar to ROGs and are part of O₃ precursors. However, there are no significant emissions of GHGs from architectural coatings. The architectural coating phase in Table M shows GHG emissions from equipment exhaust and energy use.

Long-term operation of the proposed project would generate GHG emissions from area and mobile sources and indirect emissions from stationary sources associated with energy consumption. Mobile-source emissions of GHGs would include project-generated vehicle trips associated with on-site facilities and customers/visitors to the project site. Area-source emissions would be associated with activities such as landscaping and maintenance of proposed land uses, natural gas for heating, and other sources. Increases in stationary-source emissions would also occur at off-site utility providers as a result of demand for electricity, natural gas, and water by the proposed uses.

Permanent vegetation changes that occur as a result of project development constitute a onetime change in the carbon sequestration capacity of a project site. Since the existing site has a nursery with lots of plants and the project plans do not show sufficient detail to determine the extent of the vegetation changes, this analysis assumed no change to vegetation.

The GHG emission estimates presented in Table N show the emissions associated with the level of development envisioned by the proposed project at opening. Appendix A includes the worksheets for the GHG emissions. Area sources include architectural coatings, consumer products, hearth, and landscaping. Energy sources include natural gas consumption for heating and cooking.

Table N: 2017 Long-Term Operational Greenhouse Gas Emissions

Source	Pollutant Emissions (MT/year)					
	Bio-CO ₂	NBio-CO ₂	Total CO ₂	CH ₄	N ₂ O	CO ₂ e
Existing Nursery	110	1,000	1,100	6.9	0.0049	1,300
Construction Emissions amortized over 30 years	0	49	49	0.0084	0	49
Operational Emissions						
Area	0	64	64	0.0054	0.0011	65
Energy	0	890	890	0.031	0.012	900
Mobile	0	3,500	3,500	0.14	0	3,500
Waste	60	0	60	3.5	0	130
Water	5.2	93	99	0.54	0.013	110
Total Project Emissions	65	4,500	4,600	4.2	0.026	4,700
Net Emissions Change	-45	3,500	3,500	-2.7	0.021	3,400

Source: LSA Associates, Inc. (November 2013).

Note: Numbers in table may not appear to add up correctly due to rounding of all numbers to two significant digits.

Bio-CO₂ = biologically generated CO₂

CH₄ = methane

CO₂ = carbon dioxide

CO₂e = carbon dioxide equivalent

MT = metric tons

N₂O = nitrous oxide

NBio-CO₂ = Non-biologically generated CO₂

As shown in Table N, the project will result in an increase of 3,400 MT of CO₂e/yr, which is 0.0034 MMTCO₂e/yr. For comparison, the existing emissions from the entire SCAG region are estimated to be approximately 176.79 MMTCO₂e/yr, and the existing emissions for the entire State are estimated at approximately 448 MMTCO₂e/yr.

The estimated service population for the proposed project totals 715 residents in the 250 residences, plus approximately 20 service employees performing maintenance, landscaping, and other services. Dividing the total operational GHG emissions by the service population results in an efficiency metric of 4.6 MT/SP/YR. The efficiency metrics are lower than the SCAQMD draft efficiency threshold of 4.8 MT/SP/YR. Thus, using the SCAQMD draft efficiency metric as a numeric threshold, the proposed project would have less than significant operational GHG emission impacts.

Energy/Natural Gas Use. Buildings represent 39 percent of the United States' primary energy usage and 70 percent of its electricity consumption.¹ The proposed project would increase the demand for electricity and natural gas due to the increased building area and number of residents. The project would indirectly result in increased GHG emissions from off-site electricity generation at power plants and on-site natural gas consumption (900 MT of CO₂e/year).

Area Sources. Area sources of GHG emissions include architectural coatings, consumer products, hearth, and landscaping. The project would result in increased GHG emissions from the area sources (65 MT of CO₂e/year).

Water Use. Water-related energy use consumes 19 percent of California's electricity every year.² Energy use and related GHG emissions are based on electricity used for water supply and conveyance, water treatment, water distribution, and wastewater treatment. The project would indirectly result in increased GHG emissions from the off-site electricity generation at power plants and on-site natural gas consumption (110 MT of CO₂e/year).

Solid Waste Disposal. The proposed project would also generate solid waste during the operation phase of the project. Average waste generation rates from a variety of sources are available from the California Integrated Waste Management Board (CIWMB).³ The project would indirectly result in increased GHG emissions from solid waste treatment at treatment plants (130 MT of CO₂e/year).

Mobile Sources. Mobile sources (vehicle trips and associated miles traveled) are the largest source of GHG emissions in California and represent approximately 38 percent of annual CO₂ emissions generated in the State. Like most land use development projects, VMT is the most direct indicator of CO₂ emissions from the proposed project, and associated CO₂ emissions function as the best indicator of total GHG emissions. Emissions from vehicle exhaust would comprise approximately 74 percent of the project's total CO₂e emissions. Emissions from vehicle exhaust are controlled by the State and federal governments and are outside the control of the City.

The remaining CO₂e emissions are primarily associated with building heating systems and increased regional power plant electricity generation due to the project's electrical demands. Specific development projects proposed under the project would comply with existing State and federal regulations regarding the energy efficiency of buildings, appliances, and lighting, which would reduce the project's electricity demand. The new buildings constructed in accordance with current energy efficiency standards would be more energy efficient than older buildings. Beginning on January 1, 2014, several new Building Codes have been enforced in California. All structures other than one- and two-family dwellings and townhomes will be built under the new 2013 California Building Code (CBC) to improve public health, safety, and general welfare by enhancing the design

¹ United States Department of Energy. 2003. *Buildings Energy Data Book*.

² California Energy Commission, 2005. California's Water-Energy Relationship. November.

³ CIWMB, 2009. Estimated Solid Waste Generation Rates for Residential Developments. Available at <http://www.ciwmb.ca.gov/wastechar/wastegenrates/Residential.htm>.

and construction of buildings through the use of building concepts having a positive environmental impact and encouraging sustainable construction practices.

At present, there is a federal ban on chlorofluorocarbons (CFCs); therefore, it is assumed the project would not generate emissions of CFCs. The project may emit a small amount of HFCs from leakage and service of refrigeration and air-conditioning equipment and from disposal at the end of the life of the equipment. However, the details regarding refrigerants to be used at the project site are unknown at this time. PFCs and SF₆ are typically used in industrial applications, none of which would be used on the project site. Therefore, it is not anticipated that the project would contribute significant emissions of these additional GHGs.

Table O compares the Baker Ranch Planned Community Text land use of 341,499 sf of commercial development to the proposed project in 2030. This shows that the proposed project would result in substantially lower GHG emissions than the current Baker Ranch Planned Community Text land use would produce.

Table O: 2030 Long-Term Operational Greenhouse Gas Emissions

Source	Pollutant Emissions (MT/year)					
	Bio-CO ₂	NBio-CO ₂	Total CO ₂	CH ₄	N ₂ O	CO ₂ e
Baker Ranch Planned Community Text land use of 341,499 sf of Commercial Development						
Total Commercial Development Emissions	81	13,000	14,000	5.5	0.034	14,000
Construction Emissions amortized over 30 years	0	49	49	0.0084	0	49
Operational Emissions						
Area	0	64	64	0.0052	0.0011	65
Energy	0	890	890	0.031	0.012	900
Mobile	0	3,000	3,000	0.085	0	3,000
Waste	60	0	60	3.5	0	130
Water	5.2	93	99	0.54	0.013	110
Total Project Emissions	65	4,000	4,100	4.2	0.026	4,200
Net Emissions Change	-16	-9,000	-9,900	-1.3	-0.008	-9,800

Source: LSA Associates, Inc. (November 2013).

Note: Numbers in table may not appear to add up correctly due to rounding of all numbers to two significant digits.

Bio-CO₂ = biologically generated CO₂

MT = metric tons

CH₄ = methane

N₂O = nitrous oxide

CO₂ = carbon dioxide

NBio-CO₂ = Non-biologically generated CO₂

CO₂e = carbon dioxide equivalent

This emissions level, less than 0.001 percent of the State total, is also unlikely to result in GHG emission levels that would substantially conflict with implementation of the GHG reduction goals under AB 32 or other State regulations. The CAT and ARB have developed several reports to achieve the Governor's GHG targets that rely on voluntary actions of California businesses, local government and community groups, and State incentive and regulatory programs. These include the CAT's 2010 "Report to Governor Schwarzenegger and the Legislature," ARB's 2007 "Expanded List of Early Action Measures to Reduce Greenhouse Gas Emissions in California," and ARB's "Climate Change Proposed Scoping Plan: a Framework for Change."

The reports identify strategies to reduce California's emissions to the levels proposed in EO S-3-05 and AB 32 that are applicable to the proposed project. The Proposed Scoping Plan is the most recent document, and the strategies included in the Scoping Plan that apply to the project are contained in Table P, which also summarizes the extent to which the project would comply with the strategies to help California reach the emission reduction targets.

Table P: Project Compliance with Greenhouse Gas Emission Reduction Strategies

Strategy	Project Compliance
Energy Efficiency Measures	
Energy Efficiency. Maximize energy efficiency building and appliance standards, and pursue additional efficiency efforts including new technologies, and new policy and implementation mechanisms. Pursue comparable investment in energy efficiency from all retail providers of electricity in California (including both investor-owned and publicly owned utilities).	Compliant with Mitigation Incorporated. The proposed project will comply with the updated Title 24 standards, including the 2013 CBC, for building construction. In addition, the project would implement Project Feature GCC-1, identified later, including measures to incorporate energy-efficient building design features.
Renewables Portfolio Standard. Achieve a 33 percent renewable energy mix statewide.	
Green Building Strategy. Expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings.	
Water Conservation and Efficiency Measures	
Water Use Efficiency. Continue efficiency programs and use cleaner energy sources to move and treat water. Approximately 19 percent of all electricity, 30 percent of all natural gas, and 88 million gallons of diesel are used to convey, treat, distribute and use water and wastewater. Increasing the efficiency of water transport and reducing water use would reduce GHG emissions.	Compliant. The project would implement Project Feature GCC-1, identified later, including measures to increase water use efficiency.
Solid Waste Reduction Measures	
Increase Waste Diversion, Composting, and Commercial Recycling, and Move Toward Zero-Waste. Increase waste diversion from landfills beyond the 50 percent mandate to provide for additional recovery of recyclable materials. Composting and commercial recycling could have substantial GHG reduction benefits. In the long term, zero-waste policies that would require manufacturers to design products to be fully recyclable may be necessary.	Compliant. Data available from the CIWMB indicates that the City of Lake Forest (Orange County) has not achieved the 50 percent diversion rate. The proposed project would implement Project Feature GCC-1, identified later, including measures to increase solid waste diversion, composting, and recycling.
Transportation and Motor Vehicle Measures	
Vehicle Climate Change Standards. AB 1493 (Pavley) required the State to develop and adopt regulations that achieve the maximum feasible and cost-effective reduction of GHG emissions from passenger vehicles and light-duty trucks. Regulations were adopted by the ARB in September 2004.	Compliant. The project does not involve the manufacture of vehicles. However, vehicles that are purchased and used within the project site would comply with any vehicle and fuel standards that the ARB adopts.
Light-Duty Vehicle Efficiency Measures. Implement additional measures that could reduce light-duty GHG emissions. For example, measures to ensure that tires are properly inflated can both reduce GHG emissions and improve	

Table P: Project Compliance with Greenhouse Gas Emission Reduction Strategies

Strategy	Project Compliance
<p>fuel efficiency.</p> <p>Adopt Heavy- and Medium-Duty Fuel and Engine Efficiency Measures. Regulations to require retrofits to improve the fuel efficiency of heavy-duty trucks that could include devices that reduce aerodynamic drag and rolling resistance. This measure could also include hybridization of and increased engine efficiency of vehicles.</p> <p>Low Carbon Fuel Standard. ARB identified this measure as a Discrete Early Action Measure. This measure would reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020.</p>	
<p>Regional Transportation-Related Greenhouse Gas Targets. Develop regional GHG emissions reduction targets for passenger vehicles. Local governments will play a significant role in the regional planning process to reach passenger vehicle GHG emissions reduction targets. Local governments have the ability to directly influence both the siting and design of new residential and commercial developments in a way that reduces GHGs associated with vehicle travel.</p>	<p>Compliant. Specific regional emission targets for transportation emissions do not directly apply to this project; regional GHG reduction target development is outside the scope of this project. The project will comply with any plans developed by the City of Lake Forest and Orange County.</p>
<p>Measures to Reduce High-GWP Gases. ARB has identified Discrete Early Action measures to reduce GHG emissions from the refrigerants used in car air conditioners, semiconductor manufacturing, and consumer products. ARB has also identified potential reduction opportunities for future commercial and industrial refrigeration, changing the refrigerants used in auto air conditioning systems, and ensuring that existing car air conditioning systems do not leak.</p>	<p>Compliant. New products used or serviced on the project site (after implementation of the reduction of GHGs) would comply with future ARB rules and regulations.</p>

Source: LSA Associates, Inc. (October 2013).

AB = Assembly Bill

ARB = California Air Resources Board

CBC = California Building Code

CIWMB = California Integrated Waste Management Board

GHG = greenhouse gas

GWP = Global Warming Potential

The strategies listed in Table P are either part of the project design or requirements under local or State ordinances. With implementation of these strategies/measures, the project's contribution to cumulative GHG emissions would be reduced. In order to ensure that the proposed project complies with and would not conflict with or impede the implementation of reduction goals identified in AB 32, the Governor's EO S-3-05, and other strategies to help reduce GHGs to the level proposed by the Governor, Project Feature GCC-1 shall be implemented.

LONG-TERM MICROSCALE (CO HOT SPOT) ANALYSIS

Vehicular trips associated with the proposed project would contribute to congestion at intersections and along roadway segments in the project vicinity. Localized air quality impacts would occur when emissions from vehicular traffic increase as a result of the proposed project. The primary mobile-source pollutant of local concern is CO, a direct function of vehicle idling time and, thus, of traffic flow conditions. CO transport is extremely limited; under normal meteorological conditions, it

disperses rapidly with distance from the source. However, under certain extreme meteorological conditions, CO concentrations near a congested roadway or intersection may reach unhealthful levels, affecting local sensitive receptors (residents, school children, the elderly, hospital patients, etc.). Typically, high CO concentrations are associated with roadways or intersections operating at unacceptable levels of service or with extremely high traffic volumes. In areas with high ambient background CO concentrations, modeling is recommended, to determine a project's effect on local CO levels.

An assessment of project-related impacts on localized ambient air quality requires that future ambient air quality levels be projected. Existing CO concentrations in the immediate project vicinity are not available. Ambient CO levels monitored at the Mission Viejo Station, the closest station with complete monitored CO data, showed a highest recorded 1-hour concentration of 1.5 ppm (State standard is 20 ppm) and a highest 8-hour concentration of 1.1 ppm (State standard is 9 ppm) during the past 3 years (see Table F). The highest CO concentrations would normally occur during peak traffic hours; hence, CO impacts calculated under peak traffic conditions represent a worst-case analysis.

The project would result in only a maximum of 2,380 vehicular trips per day. This is only 1,350 trips per day more than the existing use and would be 12,200 trips per day less than the shopping center use if the project is not implemented. Given the extremely low level of CO concentrations in the project area, project-related vehicles are not expected to contribute significantly to result in the CO concentrations exceeding the State or federal CO standards. Because no CO hot spot would occur, there would be no project-related impacts on CO concentrations.

AIR QUALITY MANAGEMENT PLAN CONSISTENCY

A consistency determination plays an essential role in local agency project review by linking local planning and unique individual projects to the air quality plans. It fulfills the CEQA goal of fully informing local agency decision-makers of the environmental costs of the project under consideration at a stage early enough to ensure that air quality concerns are addressed. Only new or amended General Plan elements, Specific Plans, and significantly unique projects need to undergo a consistency review due to the air quality plan strategy being based on projections from local General Plans.

The AQMP is based on regional growth projections developed by the SCAG. The proposed project is a residential development and is not defined as a regionally significant project under CEQA; therefore, it does not meet the SCAG's Intergovernmental Review (IGR) criteria.

The proposed uses are no more intense than the previously approved (shopping center) land uses and would generate equivalent or less traffic than allowed (shopping center) uses, so it is consistent with General Plan of the City, which is consistent with the SCAG RCP Guidelines and the SCAQMD AQMP. Pursuant to the methodology provided in Chapter 12 of the 1993 SCAQMD *CEQA Air Quality Handbook*, consistency with the Basin 2012 AQMP is affirmed when a project (1) does not increase the frequency or severity of an air quality standards violation or cause a new violation; and (2) is consistent with the growth assumptions in the AQMP. Consistency review is presented below:

1. The project would result in short-term construction and long-term pollutant emissions that are less than the CEQA significance emissions thresholds established by the SCAQMD with mitigation incorporated, as demonstrated above; therefore, the project could not result in an increase in the frequency or severity of any air quality standards violation and will not cause a new air quality standard violation.
2. The *CEQA Air Quality Handbook* indicates that consistency with AQMP growth assumptions must be analyzed for new or amended General Plan elements, Specific Plans, and significant projects. Significant projects include airports, electrical generating facilities, petroleum and gas refineries, designation of oil drilling districts, water ports, solid waste disposal sites, and offshore drilling facilities; therefore, the proposed project is not defined as significant.

Based on the consistency analysis presented above, the proposed project is consistent with the General Plans and the regional AQMP.

STANDARD CONDITIONS

Construction Operations

The project is required to comply with regional rules that assist in reducing short-term air pollutant emissions. SCAQMD Rule 403 requires that fugitive dust be controlled with best-available control measures so that the presence of such dust does not remain visible in the atmosphere beyond the property line of the emission source. In addition, SCAQMD Rule 403 requires implementation of dust suppression techniques to prevent fugitive dust from creating a nuisance off site. Applicable dust suppression techniques from Rule 403 are summarized below. Implementation of these dust suppression techniques can reduce the fugitive dust generation (and thus the PM₁₀ component). Compliance with these rules would reduce impacts on nearby sensitive receptors. See <http://www.aqmd.gov/rules/reg/reg04/r403.pdf> for rule details. As shown in Table H, implementation of Rule 403 measures results in dust emissions below SCAQMD thresholds.

The applicable Rule 403 measures are as follows:

- Apply nontoxic chemical soil stabilizers according to manufacturers' specifications to all inactive construction areas (previously graded areas inactive for 10 days or more).
- Water active sites at least twice daily. (Locations where grading is to occur will be thoroughly watered prior to earthmoving.)
- Cover all trucks hauling dirt, sand, soil, or other loose materials, or maintain at least 0.6 m (2 ft) of freeboard (vertical space between the top of the load and top of the trailer) in accordance with the requirements of California Vehicle Code (CVC) Section 23114.
- Pave construction access roads at least 30 m (100 ft) onto the site from the main road.
- Reduce traffic speeds on all unpaved roads to 15 mph or less.
- Recycle/reuse at least 50 percent of the construction material (including, but not limited to, soil, mulch, vegetation, concrete, lumber, metal, and cardboard).

- Use “green building materials” such as those materials that are rapidly renewable or resource-efficient, and recycled and manufactured in an environmentally friendly way, for at least 10 percent of the project, as defined on the CalRecycle website.¹

Operations

The proposed project is required to comply with Title 24 of the California Code of Regulations (CCR) established by the CEC regarding energy conservation and green buildings standards. The project applicant shall incorporate the following in building plans:

- Low-emission water heaters shall be used. Solar water heaters are encouraged.
- Exterior windows shall utilize window treatments for efficient energy conservation.

These measures will result in reduced emissions during the construction and operation phases of the proposed project.

PROJECT FEATURE

Global Climate Change Impacts

Project Feature GCC-1

To ensure that the proposed project complies with and would not conflict with or impede the implementation of reduction goals identified in Assembly Bill (AB) 32, the Governor’s Executive Order (EO) S-3-05, and other strategies to help reduce greenhouse gases (GHGs) to the level proposed by the Governor, the project will implement a variety of measures that will reduce its GHG emissions. To the extent feasible, and to the satisfaction of the City of Lake Forest (City), the following measures will be incorporated into the design and construction of the project (including specific building projects):

Construction and Building Materials.

- Use locally produced and/or manufactured building materials for at least 10 percent of the construction materials used for the project.
- Recycle/reuse at least 50 percent of the demolished and/or grubbed construction materials (including, but not limited to, soil, vegetation, concrete, lumber, metal, and cardboard) if feasible.
- Use “Green Building Materials,” such as those materials that are resource-efficient and are recycled and manufactured in an

¹ <http://www.calrecycle.ca.gov/>.

environmentally friendly way, for at least 10 percent of the project.

Energy Efficiency Measures.

- Design all project buildings to exceed the California Building Code's (CBC) Title 24 energy standard by 20 percent, including, but not limited to, any combination of the following:
 - Increase insulation such that heat transfer and thermal bridging is minimized;
 - Limit air leakage through the structure or within the heating and cooling distribution system to minimize energy consumption; and
 - Incorporate ENERGY STAR or better rated windows, space heating and cooling equipment, light fixtures, appliances, or other applicable electrical equipment.
- Install efficient lighting and lighting control systems. Use daylight as an integral part of the lighting systems in buildings.
- Install light-colored "cool" roofs and cool pavements.
- Install energy-efficient heating and cooling systems, appliances and equipment, and control systems.
- Install solar lights or light-emitting diodes (LEDs) for outdoor lighting or outdoor lighting that meets the City of Lake Forest City Code.

Water Conservation and Efficiency Measures.

- Devise a comprehensive water conservation strategy appropriate for the project and its location. The strategy may include the following, plus other innovative measures that may be appropriate:
 - Create water-efficient landscapes within the development.
 - Install water-efficient irrigation systems and devices, such as soil moisture-based irrigation controls.
 - Use reclaimed water, if available, for landscape irrigation within the project. Install the infrastructure to deliver and use reclaimed water, if available.
 - Design buildings to be water-efficient. Install water-efficient fixtures and appliances, including low-flow faucets, dual-flush toilets, and waterless urinals.
 - Restrict watering methods (e.g., prohibit systems that apply water to nonvegetated surfaces) and control runoff.

Solid Waste Measures.

- To facilitate and encourage recycling to reduce landfill-associated emissions, among others, the project will provide trash enclosures that include additional enclosed area(s) for collection of recyclable materials. The recycling collection area(s) will be located within, near, or adjacent to each trash and rubbish disposal area. The recycling collection area will be a minimum of 50 percent of the area provided for the trash/rubbish enclosure(s) or as approved by the waste management department of the City of Lake Forest.
- Provide employee education on waste reduction and available recycling services.

Transportation Measures.

- To facilitate and encourage nonmotorized transportation, bicycle racks shall be provided in convenient locations to facilitate bicycle access to the project area. The bicycle racks shall be shown on project landscaping and improvement plans submitted for Planning Department approval and shall be installed in accordance with those plans.
- Provide pedestrian walkway and connectivity requirements.

In addition, the project would be subject to all applicable regulatory requirements, which would also reduce the GHG emissions of the project. With implementation of Project Feature GCC-1 and application of regulatory requirements, the project would not conflict with or impede implementation of reduction goals identified in AB 32, the Governor's EO S-3-05, and other strategies to help reduce GHGs to the level proposed by the Governor. Therefore, the project's contribution to cumulative GHG emissions would be less than significant.

CUMULATIVE IMPACTS

The project would contribute criteria pollutants to the area during temporary project construction. A number of individual projects in the area may be under construction simultaneously with the proposed project. Depending on construction schedules and actual implementation of projects in the area, generation of fugitive dust and pollutant emissions during construction could result in substantial short-term increases in air pollutants. However, each project would be required to comply with the SCAQMD's standard construction measures. The proposed project's short-term construction emissions would not exceed the significance thresholds. Therefore, it will not have a significant short-term cumulative impact.

The project's long-term operational emissions would not exceed the SCAQMD's criteria pollutant thresholds. As climate change impacts are cumulative in nature, no typical single project can result in emissions of such a magnitude that it, in and of itself, would be significant on project basis. Therefore, as the net change in GHG emissions would not exceed the SCAQMD efficiency metric, the proposed project would result in less than significant cumulative impacts on global climate

change. Therefore, the proposed project would not result in a significant long-term cumulative impact.

IMPACTS TO THE PROPOSED PROJECT FROM GLOBAL CLIMATE CHANGE

Local temperatures could increase in time as a result of GCC with or without development as envisioned by the project. This increase in temperature could lead to other climate effects, including, but not limited to, increased flooding due to increased precipitation and runoff. At present, the extent of climate change impacts is uncertain, and more extensive monitoring of runoff is necessary for greater understanding of changes in hydrologic patterns. Studies indicate that increased temperatures could result in a greater portion of peak stream flows occurring earlier in the spring, with decreases in late spring and early summer. These changes could have implications for water supply, flood management, and ecosystem health. In addition, there is a potential for sea level rising due to global warming. However, as the project site is located more than 8 miles from the ocean and at an elevation that would not subject it to local flooding, the proposed project is not expected to be significantly affected by GCC.

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APPENDIX A

CALEEMOD MODEL PRINTOUTS

BAKER RANCH PROPERTIES

PROPOSED 250 RESIDENCES – OPENING YEAR

CALEEMOD MODELING OUTPUT FILES

Baker Ranch

South Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	250.00	Dwelling Unit	30.00	450,000.00	715

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	8			Operational Year	2017
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	630.89	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Site is 30 acres.

Construction Phase - Schedule estimated from site plan, assuming architectural coatings will be applied during building construction phase and a 2017

Demolition -

Grading -

Vehicle Trips - Weekday trip rate from traffic study, left Saturday and Sunday rates at CalEEMod defaults.

Woodstoves - Only gas fireplaces allowed, assumed all residences would have a fireplace.

Sequestration - Assuming trees would be added to site, estimating 50.

Construction Off-road Equipment Mitigation - Dust control measures as required by SCAQMD Rule 403.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	35.00	345.00

tblConstructionPhase	NumDays	440.00	522.00
tblConstructionPhase	NumDays	30.00	20.00
tblConstructionPhase	PhaseEndDate	8/24/2018	4/30/2017
tblConstructionPhase	PhaseEndDate	4/28/2017	4/30/2017
tblConstructionPhase	PhaseStartDate	5/1/2017	1/2/2016
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	212.50	250.00
tblFireplaces	NumberNoFireplace	25.00	0.00
tblFireplaces	NumberWood	12.50	0.00
tblGrading	MaterialExported	0.00	17,360.00
tblGrading	MaterialExported	0.00	10,000.00
tblLandUse	LotAcreage	81.17	30.00
tblProjectCharacteristics	OperationalYear	2014	2017
tblSequestration	NumberOfNewTrees	0.00	50.00
tblVehicleTrips	WD_TR	9.57	9.52
tblWoodstoves	NumberCatalytic	12.50	0.00
tblWoodstoves	NumberNoncatalytic	12.50	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2015	7.8088	94.2862	62.4183	0.1002	19.4126	4.0624	22.8374	10.2907	3.7374	13.4414	0.0000	10,361.0549	10,361.0549	1.9783	0.0000	10,402.5999

2016	14.6519	33.7857	30.0889	0.0510	1.3759	2.2122	3.5881	0.3682	2.0894	2.4576	0.0000	4,824.6181	4,824.6181	0.7653	0.0000	4,840.6894
2017	14.2477	31.2335	28.8700	0.0509	1.3760	1.9982	3.3742	0.3682	1.8865	2.2547	0.0000	4,736.4368	4,736.4368	0.7443	0.0000	4,752.0668
Total	36.7083	159.3054	121.3773	0.2021	22.1645	8.2728	29.7997	11.0271	7.7132	18.1537	0.0000	19,922.1098	19,922.1098	3.4879	0.0000	19,995.3561

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2015	7.8088	94.2862	62.4183	0.1002	8.3577	4.0624	11.7824	4.2277	3.7374	7.3785	0.0000	10,361.0549	10,361.0549	1.9783	0.0000	10,402.5999
2016	14.6519	33.7857	30.0889	0.0510	1.3759	2.2122	3.5881	0.3682	2.0894	2.4576	0.0000	4,824.6181	4,824.6181	0.7653	0.0000	4,840.6894
2017	14.2477	31.2335	28.8700	0.0509	1.3760	1.9982	3.3742	0.3682	1.8865	2.2547	0.0000	4,736.4368	4,736.4368	0.7443	0.0000	4,752.0668
Total	36.7083	159.3054	121.3773	0.2021	11.1096	8.2728	18.7447	4.9642	7.7132	12.0908	0.0000	19,922.1098	19,922.1098	3.4879	0.0000	19,995.3560

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	49.88	0.00	37.10	54.98	0.00	33.40	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	11.0083	0.2429	20.8596	1.0900e-003		0.4484	0.4484		0.4449	0.4449	0.0000	5,331.2557	5,331.2557	0.1388	0.0971	5,364.2576

Energy	0.2134	1.8232	0.7758	0.0116		0.1474	0.1474		0.1474	0.1474		2,327.4376	2,327.4376	0.0446	0.0427	2,341.6020
Mobile	8.9025	25.9009	105.4061	0.2727	18.2608	0.3792	18.6400	4.8791	0.3490	5.2281		23,196.4255	23,196.4255	0.8751		23,214.8035
Total	20.1241	27.9669	127.0415	0.2854	18.2608	0.9750	19.2358	4.8791	0.9413	5.8204	0.0000	30,855.1188	30,855.1188	1.0585	0.1397	30,920.6631

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	11.0083	0.2429	20.8596	1.0900e-003		0.4484	0.4484		0.4449	0.4449	0.0000	5,331.2557	5,331.2557	0.1388	0.0971	5,364.2576
Energy	0.2134	1.8232	0.7758	0.0116		0.1474	0.1474		0.1474	0.1474		2,327.4376	2,327.4376	0.0446	0.0427	2,341.6020
Mobile	8.9025	25.9009	105.4061	0.2727	18.2608	0.3792	18.6400	4.8791	0.3490	5.2281		23,196.4255	23,196.4255	0.8751		23,214.8035
Total	20.1241	27.9669	127.0415	0.2854	18.2608	0.9750	19.2358	4.8791	0.9413	5.8204	0.0000	30,855.1188	30,855.1188	1.0585	0.1397	30,920.6631

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2015	1/28/2015	5	20	
2	Site Preparation	Site Preparation	1/29/2015	2/25/2015	5	20	
3	Grading	Grading	2/26/2015	4/29/2015	5	45	
4	Building Construction	Building Construction	4/30/2015	4/30/2017	5	522	

5	Architectural Coating	Architectural Coating	1/2/2016	4/30/2017	5	345
6	Paving	Paving	5/1/2017	6/16/2017	5	35

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 112.5

Acres of Paving: 0

Residential Indoor: 911,250; Residential Outdoor: 303,750; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	91.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	1,250.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	2,170.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	90.00	27.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.9844	0.0000	0.9844	0.1490	0.0000	0.1490			0.0000			0.0000
Off-Road	4.5083	48.3629	36.0738	0.0399		2.4508	2.4508		2.2858	2.2858		4,127.1934	4,127.1934	1.1188		4,150.6886
Total	4.5083	48.3629	36.0738	0.0399	0.9844	2.4508	3.4352	0.1490	2.2858	2.4348		4,127.1934	4,127.1934	1.1188		4,150.6886

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0888	1.4270	0.9573	3.3600e-003	0.0793	0.0244	0.1036	0.0217	0.0224	0.0441		342.3576	342.3576	2.7000e-003		342.4144
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0692	0.0866	1.0745	2.1300e-003	0.1677	1.4800e-003	0.1691	0.0445	1.3500e-003	0.0458		184.8048	184.8048	9.9400e-003		185.0135
Total	0.1580	1.5136	2.0318	5.4900e-003	0.2469	0.0259	0.2728	0.0662	0.0238	0.0899		527.1624	527.1624	0.0126		527.4279

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3839	0.0000	0.3839	0.0581	0.0000	0.0581			0.0000			0.0000
Off-Road	4.5083	48.3629	36.0738	0.0399		2.4508	2.4508		2.2858	2.2858	0.0000	4,127.1934	4,127.1934	1.1188		4,150.6886
Total	4.5083	48.3629	36.0738	0.0399	0.3839	2.4508	2.8347	0.0581	2.2858	2.3439	0.0000	4,127.1934	4,127.1934	1.1188		4,150.6886

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0888	1.4270	0.9573	3.3600e-003	0.0793	0.0244	0.1036	0.0217	0.0224	0.0441		342.3576	342.3576	2.7000e-003		342.4144

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0692	0.0866	1.0745	2.1300e-003	0.1677	1.4800e-003	0.1691	0.0445	1.3500e-003	0.0458		184.8048	184.8048	9.9400e-003		185.0135
Total	0.1580	1.5136	2.0318	5.4900e-003	0.2469	0.0259	0.2728	0.0662	0.0238	0.0899		527.1624	527.1624	0.0126		527.4279

3.3 Site Preparation - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.1228	0.0000	18.1228	9.9392	0.0000	9.9392			0.0000			0.0000
Off-Road	5.2609	56.8897	42.6318	0.0391		3.0883	3.0883		2.8412	2.8412		4,111.7444	4,111.7444	1.2275		4,137.5225
Total	5.2609	56.8897	42.6318	0.0391	18.1228	3.0883	21.2111	9.9392	2.8412	12.7805		4,111.7444	4,111.7444	1.2275		4,137.5225

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.2201	19.6021	13.1497	0.0462	1.0886	0.3347	1.4233	0.2981	0.3079	0.6059		4,702.7142	4,702.7142	0.0372		4,703.4943
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0830	0.1039	1.2894	2.5500e-003	0.2012	1.7700e-003	0.2030	0.0534	1.6200e-003	0.0550		221.7657	221.7657	0.0119		222.0162
Total	1.3032	19.7060	14.4391	0.0487	1.2898	0.3365	1.6263	0.3514	0.3095	0.6609		4,924.4800	4,924.4800	0.0491		4,925.5105

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0679	0.0000	7.0679	3.8763	0.0000	3.8763			0.0000			0.0000
Off-Road	5.2609	56.8897	42.6318	0.0391		3.0883	3.0883		2.8412	2.8412	0.0000	4,111.7444	4,111.7444	1.2275		4,137.5224
Total	5.2609	56.8897	42.6318	0.0391	7.0679	3.0883	10.1562	3.8763	2.8412	6.7175	0.0000	4,111.7444	4,111.7444	1.2275		4,137.5224

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.2201	19.6021	13.1497	0.0462	1.0886	0.3347	1.4233	0.2981	0.3079	0.6059		4,702.7142	4,702.7142	0.0372		4,703.4943
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0830	0.1039	1.2894	2.5500e-003	0.2012	1.7700e-003	0.2030	0.0534	1.6200e-003	0.0550		221.7657	221.7657	0.0119		222.0162
Total	1.3032	19.7060	14.4391	0.0487	1.2898	0.3365	1.6263	0.3514	0.3095	0.6609		4,924.4800	4,924.4800	0.0491		4,925.5105

3.4 Grading - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Category	lb/day										lb/day				
Fugitive Dust					8.7170	0.0000	8.7170	3.6031	0.0000	3.6031			0.0000		0.0000
Off-Road	6.7751	79.0467	50.8400	0.0618		3.8022	3.8022		3.4980	3.4980		6,486.2433	6,486.2433	1.9364	6,526.9080
Total	6.7751	79.0467	50.8400	0.0618	8.7170	3.8022	12.5191	3.6031	3.4980	7.1011		6,486.2433	6,486.2433	1.9364	6,526.9080

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.9414	15.1241	10.1458	0.0356	0.8399	0.2583	1.0982	0.2300	0.2376	0.4675		3,628.4053	3,628.4053	0.0287		3,629.0072
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0922	0.1154	1.4326	2.8300e-003	0.2236	1.9700e-003	0.2255	0.0593	1.8000e-003	0.0611		246.4063	246.4063	0.0133		246.6847
Total	1.0336	15.2395	11.5784	0.0385	1.0635	0.2602	1.3237	0.2893	0.2394	0.5286		3,874.8116	3,874.8116	0.0419		3,875.6919

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3996	0.0000	3.3996	1.4052	0.0000	1.4052			0.0000			0.0000
Off-Road	6.7751	79.0467	50.8400	0.0618		3.8022	3.8022		3.4980	3.4980	0.0000	6,486.2433	6,486.2433	1.9364		6,526.9080

Total	6.7751	79.0467	50.8400	0.0618	3.3996	3.8022	7.2018	1.4052	3.4980	4.9032	0.0000	6,486.243 3	6,486.2433	1.9364		6,526.9080
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Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.9414	15.1241	10.1458	0.0356	0.8399	0.2583	1.0982	0.2300	0.2376	0.4675		3,628.405 3	3,628.4053	0.0287		3,629.0072
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0922	0.1154	1.4326	2.8300e-003	0.2236	1.9700e-003	0.2255	0.0593	1.8000e-003	0.0611		246.4063	246.4063	0.0133		246.6847
Total	1.0336	15.2395	11.5784	0.0385	1.0635	0.2602	1.3237	0.2893	0.2394	0.5286		3,874.811 6	3,874.8116	0.0419		3,875.6919

3.5 Building Construction - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.6591	30.0299	18.7446	0.0268		2.1167	2.1167		1.9904	1.9904		2,689.577 1	2,689.5771	0.6748		2,703.7483
Total	3.6591	30.0299	18.7446	0.0268		2.1167	2.1167		1.9904	1.9904		2,689.577 1	2,689.5771	0.6748		2,703.7483

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2552	2.6532	2.9269	5.8800e-003	0.1687	0.0459	0.2146	0.0480	0.0422	0.0902		595.6811	595.6811	4.6800e-003		595.7794
Worker	0.4151	0.5194	6.4468	0.0128	1.0060	8.8500e-003	1.0148	0.2668	8.1200e-003	0.2749		1,108.8285	1,108.8285	0.0597		1,110.0811
Total	0.6702	3.1727	9.3737	0.0186	1.1747	0.0547	1.2294	0.3148	0.0503	0.3651		1,704.5097	1,704.5097	0.0643		1,705.8606

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.6591	30.0299	18.7446	0.0268		2.1167	2.1167		1.9904	1.9904	0.0000	2,689.5771	2,689.5771	0.6748		2,703.7483
Total	3.6591	30.0299	18.7446	0.0268		2.1167	2.1167		1.9904	1.9904	0.0000	2,689.5771	2,689.5771	0.6748		2,703.7483

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2552	2.6532	2.9269	5.8800e-003	0.1687	0.0459	0.2146	0.0480	0.0422	0.0902		595.6811	595.6811	4.6800e-003		595.7794
Worker	0.4151	0.5194	6.4468	0.0128	1.0060	8.8500e-003	1.0148	0.2668	8.1200e-003	0.2749		1,108.8285	1,108.8285	0.0597		1,110.0811
Total	0.6702	3.1727	9.3737	0.0186	1.1747	0.0547	1.2294	0.3148	0.0503	0.3651		1,704.5097	1,704.5097	0.0643		1,705.8606

3.5 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.4062	28.5063	18.5066	0.0268		1.9674	1.9674		1.8485	1.8485		2,669.2864	2,669.2864	0.6620		2,683.1890
Total	3.4062	28.5063	18.5066	0.0268		1.9674	1.9674		1.8485	1.8485		2,669.2864	2,669.2864	0.6620		2,683.1890

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2255	2.3448	2.6931	5.8800e-003	0.1687	0.0381	0.2068	0.0481	0.0350	0.0831		589.1345	589.1345	4.2300e-003		589.2232
Worker	0.3747	0.4686	5.8377	0.0128	1.0060	8.4100e-003	1.0144	0.2668	7.7300e-003	0.2745		1,070.6243	1,070.6243	0.0549		1,071.7769
Total	0.6002	2.8134	8.5308	0.0186	1.1747	0.0465	1.2212	0.3148	0.0427	0.3576		1,659.7588	1,659.7588	0.0591		1,661.0001

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.4062	28.5063	18.5066	0.0268		1.9674	1.9674		1.8485	1.8485	0.0000	2,669.2864	2,669.2864	0.6620		2,683.1890
Total	3.4062	28.5063	18.5066	0.0268		1.9674	1.9674		1.8485	1.8485	0.0000	2,669.2864	2,669.2864	0.6620		2,683.1890

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2255	2.3448	2.6931	5.8800e-003	0.1687	0.0381	0.2068	0.0481	0.0350	0.0831		589.1345	589.1345	4.2300e-003		589.2232
Worker	0.3747	0.4686	5.8377	0.0128	1.0060	8.4100e-003	1.0144	0.2668	7.7300e-003	0.2745		1,070.6243	1,070.6243	0.0549		1,071.7769
Total	0.6002	2.8134	8.5308	0.0186	1.1747	0.0465	1.2212	0.3148	0.0427	0.3576		1,659.7588	1,659.7588	0.0591		1,661.0001

3.5 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730		2,639.8053	2,639.8053	0.6497		2,653.4490
Total	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730		2,639.8053	2,639.8053	0.6497		2,653.4490

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2067	2.1351	2.5329	5.8700e-003	0.1688	0.0340	0.2028	0.0481	0.0313	0.0793		579.6013	579.6013	4.0900e-003		579.6872
Worker	0.3368	0.4232	5.2833	0.0127	1.0060	8.0900e-003	1.0141	0.2668	7.4600e-003	0.2743		1,029.6518	1,029.6518	0.0507		1,030.7155
Total	0.5436	2.5582	7.8162	0.0186	1.1748	0.0421	1.2169	0.3149	0.0387	0.3536		1,609.2531	1,609.2531	0.0547		1,610.4027

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730	0.0000	2,639.8053	2,639.8053	0.6497		2,653.4490

Total	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730	0.0000	2,639.8053	2,639.8053	0.6497		2,653.4490
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Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2067	2.1351	2.5329	5.8700e-003	0.1688	0.0340	0.2028	0.0481	0.0313	0.0793		579.6013	579.6013	4.0900e-003		579.6872
Worker	0.3368	0.4232	5.2833	0.0127	1.0060	8.0900e-003	1.0141	0.2668	7.4600e-003	0.2743		1,029.6518	1,029.6518	0.0507		1,030.7155
Total	0.5436	2.5582	7.8162	0.0186	1.1748	0.0421	1.2169	0.3149	0.0387	0.3536		1,609.2531	1,609.2531	0.0547		1,610.4027

3.6 Architectural Coating - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	10.2020					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3685	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966		281.4481	281.4481	0.0332		282.1449
Total	10.5705	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966		281.4481	281.4481	0.0332		282.1449

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0749	0.0937	1.1675	2.5500e-003	0.2012	1.6800e-003	0.2029	0.0534	1.5500e-003	0.0549		214.1249	214.1249	0.0110		214.3554
Total	0.0749	0.0937	1.1675	2.5500e-003	0.2012	1.6800e-003	0.2029	0.0534	1.5500e-003	0.0549		214.1249	214.1249	0.0110		214.3554

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	10.2020					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3685	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966	0.0000	281.4481	281.4481	0.0332		282.1449
Total	10.5705	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966	0.0000	281.4481	281.4481	0.0332		282.1449

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0749	0.0937	1.1675	2.5500e-003	0.2012	1.6800e-003	0.2029	0.0534	1.5500e-003	0.0549		214.1249	214.1249	0.0110		214.3554
Total	0.0749	0.0937	1.1675	2.5500e-003	0.2012	1.6800e-003	0.2029	0.0534	1.5500e-003	0.0549		214.1249	214.1249	0.0110		214.3554

3.6 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	10.2020					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.0721
Total	10.5344	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.0721

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0674	0.0846	1.0567	2.5500e-003	0.2012	1.6200e-003	0.2028	0.0534	1.4900e-003	0.0549		205.9304	205.9304	0.0101		206.1431
Total	0.0674	0.0846	1.0567	2.5500e-003	0.2012	1.6200e-003	0.2028	0.0534	1.4900e-003	0.0549		205.9304	205.9304	0.0101		206.1431

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	10.2020					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.0721
Total	10.5344	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.0721

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0674	0.0846	1.0567	2.5500e-003	0.2012	1.6200e-003	0.2028	0.0534	1.4900e-003	0.0549		205.9304	205.9304	0.0101		206.1431
Total	0.0674	0.0846	1.0567	2.5500e-003	0.2012	1.6200e-003	0.2028	0.0534	1.4900e-003	0.0549		205.9304	205.9304	0.0101		206.1431

3.7 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9074	20.2964	14.7270	0.0223		1.1384	1.1384		1.0473	1.0473		2,281.0588	2,281.0588	0.6989		2,295.7360
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.9074	20.2964	14.7270	0.0223		1.1384	1.1384		1.0473	1.0473		2,281.0588	2,281.0588	0.6989		2,295.7360

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0561	0.0705	0.8806	2.1200e-003	0.1677	1.3500e-003	0.1690	0.0445	1.2400e-003	0.0457		171.6086	171.6086	8.4400e-003		171.7859
Total	0.0561	0.0705	0.8806	2.1200e-003	0.1677	1.3500e-003	0.1690	0.0445	1.2400e-003	0.0457		171.6086	171.6086	8.4400e-003		171.7859

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9074	20.2964	14.7270	0.0223		1.1384	1.1384		1.0473	1.0473	0.0000	2,281.0588	2,281.0588	0.6989		2,295.7360

Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.9074	20.2964	14.7270	0.0223		1.1384	1.1384		1.0473	1.0473	0.0000	2,281.0588	2,281.0588	0.6989		2,295.7360

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0561	0.0705	0.8806	2.1200e-003	0.1677	1.3500e-003	0.1690	0.0445	1.2400e-003	0.0457		171.6086	171.6086	8.4400e-003		171.7859
Total	0.0561	0.0705	0.8806	2.1200e-003	0.1677	1.3500e-003	0.1690	0.0445	1.2400e-003	0.0457		171.6086	171.6086	8.4400e-003		171.7859

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	8.9025	25.9009	105.4061	0.2727	18.2608	0.3792	18.6400	4.8791	0.3490	5.2281		23,196.4255	23,196.4255	0.8751		23,214.8035
Unmitigated	8.9025	25.9009	105.4061	0.2727	18.2608	0.3792	18.6400	4.8791	0.3490	5.2281		23,196.4255	23,196.4255	0.8751		23,214.8035

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	2,380.00	2,520.00	2192.50	8,109,634	8,109,634
Total	2,380.00	2,520.00	2,192.50	8,109,634	8,109,634

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513125	0.060112	0.180262	0.139218	0.042100	0.006630	0.016061	0.030999	0.001941	0.002506	0.004348	0.000594	0.002104

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.2134	1.8232	0.7758	0.0116		0.1474	0.1474		0.1474	0.1474		2,327.4376	2,327.4376	0.0446	0.0427	2,341.6020
NaturalGas Unmitigated	0.2134	1.8232	0.7758	0.0116		0.1474	0.1474		0.1474	0.1474		2,327.4376	2,327.4376	0.0446	0.0427	2,341.6020

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Single Family Housing	19783.2	0.2134	1.8232	0.7758	0.0116		0.1474	0.1474		0.1474	0.1474		2,327.4376	2,327.4376	0.0446	0.0427	2,341.6020
Total		0.2134	1.8232	0.7758	0.0116		0.1474	0.1474		0.1474	0.1474		2,327.4376	2,327.4376	0.0446	0.0427	2,341.6020

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Single Family Housing	19.7832	0.2134	1.8232	0.7758	0.0116		0.1474	0.1474		0.1474	0.1474		2,327.4376	2,327.4376	0.0446	0.0427	2,341.6020
Total		0.2134	1.8232	0.7758	0.0116		0.1474	0.1474		0.1474	0.1474		2,327.4376	2,327.4376	0.0446	0.0427	2,341.6020

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Category	lb/day								lb/day							
Mitigated	11.0083	0.2429	20.8596	1.0900e-003		0.4484	0.4484		0.4449	0.4449	0.0000	5,331.2557	5,331.2557	0.1388	0.0971	5,364.2576
Unmitigated	11.0083	0.2429	20.8596	1.0900e-003		0.4484	0.4484		0.4449	0.4449	0.0000	5,331.2557	5,331.2557	0.1388	0.0971	5,364.2576

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.9643					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	8.9100					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.4853	2.0000e-005	0.0265	0.0000		0.3353	0.3353		0.3318	0.3318	0.0000	5,294.1177	5,294.1177	0.1015	0.0971	5,326.3368
Landscaping	0.6487	0.2428	20.8331	1.0900e-003		0.1131	0.1131		0.1131	0.1131		37.1381	37.1381	0.0373		37.9209
Total	11.0082	0.2429	20.8596	1.0900e-003		0.4484	0.4484		0.4449	0.4449	0.0000	5,331.2557	5,331.2557	0.1387	0.0971	5,364.2576

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.9643					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	8.9100					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Hearth	0.4853	2.0000e-005	0.0265	0.0000		0.3353	0.3353		0.3318	0.3318	0.0000	5,294.1177	5,294.1177	0.1015	0.0971	5,326.3368
Landscaping	0.6487	0.2428	20.8331	1.0900e-003		0.1131	0.1131		0.1131	0.1131		37.1381	37.1381	0.0373		37.9209
Total	11.0082	0.2429	20.8596	1.0900e-003		0.4484	0.4484		0.4449	0.4449	0.0000	5,331.2557	5,331.2557	0.1387	0.0971	5,364.2576

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Vegetation

Baker Ranch
South Coast Air Basin, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	250.00	Dwelling Unit	30.00	450,000.00	715

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	8			Operational Year	2017
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	630.89	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Site is 30 acres.

Construction Phase - Schedule estimated from site plan, assuming architectural coatings will be applied during building construction phase and a 2017

Demolition -

Grading -

Vehicle Trips - Weekday trip rate from traffic study, left Saturday and Sunday rates at CalEEMod defaults.

Woodstoves - Only gas fireplaces allowed, assumed all residences would have a fireplace.

Sequestration - Assuming trees would be added to site, estimating 50.

Construction Off-road Equipment Mitigation - Dust control measures as required by SCAQMD Rule 403.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	35.00	345.00

tblConstructionPhase	NumDays	440.00	522.00
tblConstructionPhase	NumDays	30.00	20.00
tblConstructionPhase	PhaseEndDate	8/24/2018	4/30/2017
tblConstructionPhase	PhaseEndDate	4/28/2017	4/30/2017
tblConstructionPhase	PhaseStartDate	5/1/2017	1/2/2016
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	212.50	250.00
tblFireplaces	NumberNoFireplace	25.00	0.00
tblFireplaces	NumberWood	12.50	0.00
tblGrading	MaterialExported	0.00	17,360.00
tblGrading	MaterialExported	0.00	10,000.00
tblLandUse	LotAcreage	81.17	30.00
tblProjectCharacteristics	OperationalYear	2014	2017
tblSequestration	NumberOfNewTrees	0.00	50.00
tblVehicleTrips	WD_TR	9.57	9.52
tblWoodstoves	NumberCatalytic	12.50	0.00
tblWoodstoves	NumberNoncatalytic	12.50	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2015	7.8662	94.8466	63.6724	0.1000	19.4126	4.0633	22.8385	10.2907	3.7382	13.4425	0.0000	10,337.1855	10,337.1855	1.9787	0.0000	10,378.7379

2016	14.6836	33.9003	30.0815	0.0500	1.3759	2.2126	3.5885	0.3682	2.0897	2.4579	0.0000	4,739.8827	4,739.8827	0.7654	0.0000	4,755.9566
2017	14.2748	31.3361	28.8895	0.0499	1.3760	1.9986	3.3746	0.3682	1.8868	2.2551	0.0000	4,654.6594	4,654.6594	0.7444	0.0000	4,670.2920
Total	36.8246	160.0829	122.6434	0.1999	22.1645	8.2744	29.8015	11.0271	7.7147	18.1554	0.0000	19,731.7276	19,731.7276	3.4885	0.0000	19,804.9866

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2015	7.8662	94.8466	63.6724	0.1000	8.3577	4.0633	11.7836	4.2277	3.7382	7.3795	0.0000	10,337.1855	10,337.1855	1.9787	0.0000	10,378.7379
2016	14.6836	33.9003	30.0815	0.0500	1.3759	2.2126	3.5885	0.3682	2.0897	2.4579	0.0000	4,739.8827	4,739.8827	0.7654	0.0000	4,755.9566
2017	14.2748	31.3361	28.8895	0.0499	1.3760	1.9986	3.3746	0.3682	1.8868	2.2551	0.0000	4,654.6594	4,654.6594	0.7444	0.0000	4,670.2920
Total	36.8246	160.0829	122.6434	0.1999	11.1096	8.2744	18.7466	4.9642	7.7147	12.0925	0.0000	19,731.7275	19,731.7275	3.4885	0.0000	19,804.9866

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	49.88	0.00	37.10	54.98	0.00	33.39	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	11.0083	0.2429	20.8596	1.0900e-003		0.4484	0.4484		0.4449	0.4449	0.0000	5,331.2557	5,331.2557	0.1388	0.0971	5,364.2576

Energy	0.2134	1.8232	0.7758	0.0116		0.1474	0.1474		0.1474	0.1474		2,327.4376	2,327.4376	0.0446	0.0427	2,341.6020
Mobile	9.1817	27.2433	103.2954	0.2589	18.2608	0.3806	18.6414	4.8791	0.3503	5.2294		22,076.3837	22,076.3837	0.8758		22,094.7761
Total	20.4033	29.3093	124.9307	0.2717	18.2608	0.9764	19.2372	4.8791	0.9426	5.8216	0.0000	29,735.0770	29,735.0770	1.0592	0.1397	29,800.6356

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	11.0083	0.2429	20.8596	1.0900e-003		0.4484	0.4484		0.4449	0.4449	0.0000	5,331.2557	5,331.2557	0.1388	0.0971	5,364.2576
Energy	0.2134	1.8232	0.7758	0.0116		0.1474	0.1474		0.1474	0.1474		2,327.4376	2,327.4376	0.0446	0.0427	2,341.6020
Mobile	9.1817	27.2433	103.2954	0.2589	18.2608	0.3806	18.6414	4.8791	0.3503	5.2294		22,076.3837	22,076.3837	0.8758		22,094.7761
Total	20.4033	29.3093	124.9307	0.2717	18.2608	0.9764	19.2372	4.8791	0.9426	5.8216	0.0000	29,735.0770	29,735.0770	1.0592	0.1397	29,800.6356

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2015	1/28/2015	5	20	
2	Site Preparation	Site Preparation	1/29/2015	2/25/2015	5	20	
3	Grading	Grading	2/26/2015	4/29/2015	5	45	
4	Building Construction	Building Construction	4/30/2015	4/30/2017	5	522	

5	Architectural Coating	Architectural Coating	1/2/2016	4/30/2017	5	345
6	Paving	Paving	5/1/2017	6/16/2017	5	35

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 112.5

Acres of Paving: 0

Residential Indoor: 911,250; Residential Outdoor: 303,750; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating –

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	91.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	1,250.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	2,170.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	90.00	27.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.9844	0.0000	0.9844	0.1490	0.0000	0.1490			0.0000			0.0000
Off-Road	4.5083	48.3629	36.0738	0.0399		2.4508	2.4508		2.2858	2.2858		4,127.1934	4,127.1934	1.1188		4,150.6886
Total	4.5083	48.3629	36.0738	0.0399	0.9844	2.4508	3.4352	0.1490	2.2858	2.4348		4,127.1934	4,127.1934	1.1188		4,150.6886

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0940	1.4788	1.0858	3.3600e-003	0.0793	0.0245	0.1037	0.0217	0.0225	0.0442		341.5469	341.5469	2.7400e-003		341.6044
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0709	0.0951	0.9938	1.9900e-003	0.1677	1.4800e-003	0.1691	0.0445	1.3500e-003	0.0458		173.3466	173.3466	9.9400e-003		173.5553
Total	0.1649	1.5740	2.0796	5.3500e-003	0.2469	0.0259	0.2728	0.0662	0.0238	0.0900		514.8935	514.8935	0.0127		515.1597

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.3839	0.0000	0.3839	0.0581	0.0000	0.0581			0.0000			0.0000
Off-Road	4.5083	48.3629	36.0738	0.0399		2.4508	2.4508		2.2858	2.2858	0.0000	4,127.1934	4,127.1934	1.1188		4,150.6886
Total	4.5083	48.3629	36.0738	0.0399	0.3839	2.4508	2.8347	0.0581	2.2858	2.3439	0.0000	4,127.1934	4,127.1934	1.1188		4,150.6886

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0940	1.4788	1.0858	3.3600e-003	0.0793	0.0245	0.1037	0.0217	0.0225	0.0442		341.5469	341.5469	2.7400e-003		341.6044

Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0709	0.0951	0.9938	1.9900e-003	0.1677	1.4800e-003	0.1691	0.0445	1.3500e-003	0.0458		173.3466	173.3466	9.9400e-003		173.5553
Total	0.1649	1.5740	2.0796	5.3500e-003	0.2469	0.0259	0.2728	0.0662	0.0238	0.0900		514.8935	514.8935	0.0127		515.1597

3.3 Site Preparation - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.1228	0.0000	18.1228	9.9392	0.0000	9.9392			0.0000			0.0000
Off-Road	5.2609	56.8897	42.6318	0.0391		3.0883	3.0883		2.8412	2.8412		4,111.7444	4,111.7444	1.2275		4,137.5225
Total	5.2609	56.8897	42.6318	0.0391	18.1228	3.0883	21.2111	9.9392	2.8412	12.7805		4,111.7444	4,111.7444	1.2275		4,137.5225

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.2916	20.3136	14.9145	0.0461	1.0886	0.3359	1.4245	0.2981	0.3089	0.6070		4,691.5785	4,691.5785	0.0376		4,692.3683
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0850	0.1141	1.1926	2.3900e-003	0.2012	1.7700e-003	0.2030	0.0534	1.6200e-003	0.0550		208.0159	208.0159	0.0119		208.2664
Total	1.3767	20.4277	16.1070	0.0485	1.2898	0.3376	1.6274	0.3514	0.3106	0.6620		4,899.5944	4,899.5944	0.0495		4,900.6347

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					7.0679	0.0000	7.0679	3.8763	0.0000	3.8763			0.0000			0.0000
Off-Road	5.2609	56.8897	42.6318	0.0391		3.0883	3.0883		2.8412	2.8412	0.0000	4,111.7444	4,111.7444	1.2275		4,137.5224
Total	5.2609	56.8897	42.6318	0.0391	7.0679	3.0883	10.1562	3.8763	2.8412	6.7175	0.0000	4,111.7444	4,111.7444	1.2275		4,137.5224

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	1.2916	20.3136	14.9145	0.0461	1.0886	0.3359	1.4245	0.2981	0.3089	0.6070		4,691.5785	4,691.5785	0.0376		4,692.3683
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0850	0.1141	1.1926	2.3900e-003	0.2012	1.7700e-003	0.2030	0.0534	1.6200e-003	0.0550		208.0159	208.0159	0.0119		208.2664
Total	1.3767	20.4277	16.1070	0.0485	1.2898	0.3376	1.6274	0.3514	0.3106	0.6620		4,899.5944	4,899.5944	0.0495		4,900.6347

3.4 Grading - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Category	lb/day										lb/day				
Fugitive Dust					8.7170	0.0000	8.7170	3.6031	0.0000	3.6031			0.0000		0.0000
Off-Road	6.7751	79.0467	50.8400	0.0618		3.8022	3.8022		3.4980	3.4980		6,486.2433	6,486.2433	1.9364	6,526.9080
Total	6.7751	79.0467	50.8400	0.0618	8.7170	3.8022	12.5191	3.6031	3.4980	7.1011		6,486.2433	6,486.2433	1.9364	6,526.9080

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.9966	15.6731	11.5073	0.0356	0.8399	0.2592	1.0990	0.2300	0.2384	0.4683		3,619.8135	3,619.8135	0.0290		3,620.4228
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0945	0.1268	1.3251	2.6600e-003	0.2236	1.9700e-003	0.2255	0.0593	1.8000e-003	0.0611		231.1287	231.1287	0.0133		231.4071
Total	1.0911	15.7999	12.8324	0.0382	1.0635	0.2611	1.3246	0.2893	0.2402	0.5294		3,850.9422	3,850.9422	0.0423		3,851.8299

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					3.3996	0.0000	3.3996	1.4052	0.0000	1.4052			0.0000			0.0000
Off-Road	6.7751	79.0467	50.8400	0.0618		3.8022	3.8022		3.4980	3.4980	0.0000	6,486.2433	6,486.2433	1.9364		6,526.9080

Total	6.7751	79.0467	50.8400	0.0618	3.3996	3.8022	7.2018	1.4052	3.4980	4.9032	0.0000	6,486.243 3	6,486.2433	1.9364		6,526.9080
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Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.9966	15.6731	11.5073	0.0356	0.8399	0.2592	1.0990	0.2300	0.2384	0.4683		3,619.813 5	3,619.8135	0.0290		3,620.4228
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0945	0.1268	1.3251	2.6600e-003	0.2236	1.9700e-003	0.2255	0.0593	1.8000e-003	0.0611		231.1287	231.1287	0.0133		231.4071
Total	1.0911	15.7999	12.8324	0.0382	1.0635	0.2611	1.3246	0.2893	0.2402	0.5294		3,850.942 2	3,850.9422	0.0423		3,851.8299

3.5 Building Construction - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.6591	30.0299	18.7446	0.0268		2.1167	2.1167		1.9904	1.9904		2,689.577 1	2,689.5771	0.6748		2,703.7483
Total	3.6591	30.0299	18.7446	0.0268		2.1167	2.1167		1.9904	1.9904		2,689.577 1	2,689.5771	0.6748		2,703.7483

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2803	2.7222	3.4714	5.8400e-003	0.1687	0.0464	0.2151	0.0480	0.0427	0.0907		590.7122	590.7122	4.8100e-003		590.8133
Worker	0.4252	0.5707	5.9629	0.0120	1.0060	8.8500e-003	1.0148	0.2668	8.1200e-003	0.2749		1,040.0793	1,040.0793	0.0597		1,041.3319
Total	0.7055	3.2929	9.4343	0.0178	1.1747	0.0553	1.2300	0.3148	0.0508	0.3656		1,630.7915	1,630.7915	0.0645		1,632.1452

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.6591	30.0299	18.7446	0.0268		2.1167	2.1167		1.9904	1.9904	0.0000	2,689.5771	2,689.5771	0.6748		2,703.7483
Total	3.6591	30.0299	18.7446	0.0268		2.1167	2.1167		1.9904	1.9904	0.0000	2,689.5771	2,689.5771	0.6748		2,703.7483

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2803	2.7222	3.4714	5.8400e-003	0.1687	0.0464	0.2151	0.0480	0.0427	0.0907		590.7122	590.7122	4.8100e-003		590.8133
Worker	0.4252	0.5707	5.9629	0.0120	1.0060	8.8500e-003	1.0148	0.2668	8.1200e-003	0.2749		1,040.0793	1,040.0793	0.0597		1,041.3319
Total	0.7055	3.2929	9.4343	0.0178	1.1747	0.0553	1.2300	0.3148	0.0508	0.3656		1,630.7915	1,630.7915	0.0645		1,632.1452

3.5 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.4062	28.5063	18.5066	0.0268		1.9674	1.9674		1.8485	1.8485		2,669.2864	2,669.2864	0.6620		2,683.1890
Total	3.4062	28.5063	18.5066	0.0268		1.9674	1.9674		1.8485	1.8485		2,669.2864	2,669.2864	0.6620		2,683.1890

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2472	2.4041	3.2325	5.8300e-003	0.1687	0.0385	0.2072	0.0481	0.0354	0.0834		584.1975	584.1975	4.3500e-003		584.2889
Worker	0.3830	0.5147	5.3820	0.0120	1.0060	8.4100e-003	1.0144	0.2668	7.7300e-003	0.2745		1,004.1257	1,004.1257	0.0549		1,005.2782
Total	0.6302	2.9188	8.6145	0.0178	1.1747	0.0469	1.2216	0.3148	0.0431	0.3580		1,588.3232	1,588.3232	0.0592		1,589.5671

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.4062	28.5063	18.5066	0.0268		1.9674	1.9674		1.8485	1.8485	0.0000	2,669.2864	2,669.2864	0.6620		2,683.1890
Total	3.4062	28.5063	18.5066	0.0268		1.9674	1.9674		1.8485	1.8485	0.0000	2,669.2864	2,669.2864	0.6620		2,683.1890

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2472	2.4041	3.2325	5.8300e-003	0.1687	0.0385	0.2072	0.0481	0.0354	0.0834		584.1975	584.1975	4.3500e-003		584.2889
Worker	0.3830	0.5147	5.3820	0.0120	1.0060	8.4100e-003	1.0144	0.2668	7.7300e-003	0.2745		1,004.1257	1,004.1257	0.0549		1,005.2782
Total	0.6302	2.9188	8.6145	0.0178	1.1747	0.0469	1.2216	0.3148	0.0431	0.3580		1,588.3232	1,588.3232	0.0592		1,589.5671

3.5 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730		2,639.8053	2,639.8053	0.6497		2,653.4490
Total	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730		2,639.8053	2,639.8053	0.6497		2,653.4490

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2258	2.1877	3.0688	5.8300e-003	0.1688	0.0343	0.2031	0.0481	0.0316	0.0796		574.7325	574.7325	4.2100e-003		574.8210
Worker	0.3436	0.4647	4.8530	0.0119	1.0060	8.0900e-003	1.0141	0.2668	7.4600e-003	0.2743		965.5613	965.5613	0.0507		966.6250
Total	0.5694	2.6524	7.9217	0.0178	1.1748	0.0424	1.2172	0.3149	0.0390	0.3539		1,540.2937	1,540.2937	0.0549		1,541.4460

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730	0.0000	2,639.8053	2,639.8053	0.6497		2,653.4490

Total	3.1024	26.4057	18.1291	0.0268		1.7812	1.7812		1.6730	1.6730	0.0000	2,639.8053	2,639.8053	0.6497		2,653.4490
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Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.2258	2.1877	3.0688	5.8300e-003	0.1688	0.0343	0.2031	0.0481	0.0316	0.0796		574.7325	574.7325	4.2100e-003		574.8210
Worker	0.3436	0.4647	4.8530	0.0119	1.0060	8.0900e-003	1.0141	0.2668	7.4600e-003	0.2743		965.5613	965.5613	0.0507		966.6250
Total	0.5694	2.6524	7.9217	0.0178	1.1748	0.0424	1.2172	0.3149	0.0390	0.3539		1,540.2937	1,540.2937	0.0549		1,541.4460

3.6 Architectural Coating - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	10.2020					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3685	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966		281.4481	281.4481	0.0332		282.1449
Total	10.5705	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966		281.4481	281.4481	0.0332		282.1449

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0766	0.1029	1.0764	2.3900e-003	0.2012	1.6800e-003	0.2029	0.0534	1.5500e-003	0.0549		200.8251	200.8251	0.0110		201.0556
Total	0.0766	0.1029	1.0764	2.3900e-003	0.2012	1.6800e-003	0.2029	0.0534	1.5500e-003	0.0549		200.8251	200.8251	0.0110		201.0556

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	10.2020					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3685	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966	0.0000	281.4481	281.4481	0.0332		282.1449
Total	10.5705	2.3722	1.8839	2.9700e-003		0.1966	0.1966		0.1966	0.1966	0.0000	281.4481	281.4481	0.0332		282.1449

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0766	0.1029	1.0764	2.3900e-003	0.2012	1.6800e-003	0.2029	0.0534	1.5500e-003	0.0549		200.8251	200.8251	0.0110		201.0556
Total	0.0766	0.1029	1.0764	2.3900e-003	0.2012	1.6800e-003	0.2029	0.0534	1.5500e-003	0.0549		200.8251	200.8251	0.0110		201.0556

3.6 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	10.2020					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.0721
Total	10.5344	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733		281.4481	281.4481	0.0297		282.0721

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0687	0.0929	0.9706	2.3900e-003	0.2012	1.6200e-003	0.2028	0.0534	1.4900e-003	0.0549		193.1123	193.1123	0.0101		193.3250
Total	0.0687	0.0929	0.9706	2.3900e-003	0.2012	1.6200e-003	0.2028	0.0534	1.4900e-003	0.0549		193.1123	193.1123	0.0101		193.3250

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	10.2020					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.3323	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.0721
Total	10.5344	2.1850	1.8681	2.9700e-003		0.1733	0.1733		0.1733	0.1733	0.0000	281.4481	281.4481	0.0297		282.0721

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0687	0.0929	0.9706	2.3900e-003	0.2012	1.6200e-003	0.2028	0.0534	1.4900e-003	0.0549		193.1123	193.1123	0.0101		193.3250
Total	0.0687	0.0929	0.9706	2.3900e-003	0.2012	1.6200e-003	0.2028	0.0534	1.4900e-003	0.0549		193.1123	193.1123	0.0101		193.3250

3.7 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9074	20.2964	14.7270	0.0223		1.1384	1.1384		1.0473	1.0473		2,281.0588	2,281.0588	0.6989		2,295.7360
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.9074	20.2964	14.7270	0.0223		1.1384	1.1384		1.0473	1.0473		2,281.0588	2,281.0588	0.6989		2,295.7360

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0573	0.0775	0.8088	1.9900e-003	0.1677	1.3500e-003	0.1690	0.0445	1.2400e-003	0.0457		160.9269	160.9269	8.4400e-003		161.1042
Total	0.0573	0.0775	0.8088	1.9900e-003	0.1677	1.3500e-003	0.1690	0.0445	1.2400e-003	0.0457		160.9269	160.9269	8.4400e-003		161.1042

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.9074	20.2964	14.7270	0.0223		1.1384	1.1384		1.0473	1.0473	0.0000	2,281.0588	2,281.0588	0.6989		2,295.7360

Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.9074	20.2964	14.7270	0.0223		1.1384	1.1384		1.0473	1.0473	0.0000	2,281.0588	2,281.0588	0.6989		2,295.7360

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0573	0.0775	0.8088	1.9900e-003	0.1677	1.3500e-003	0.1690	0.0445	1.2400e-003	0.0457		160.9269	160.9269	8.4400e-003		161.1042
Total	0.0573	0.0775	0.8088	1.9900e-003	0.1677	1.3500e-003	0.1690	0.0445	1.2400e-003	0.0457		160.9269	160.9269	8.4400e-003		161.1042

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	9.1817	27.2433	103.2954	0.2589	18.2608	0.3806	18.6414	4.8791	0.3503	5.2294		22,076.3837	22,076.3837	0.8758		22,094.7761
Unmitigated	9.1817	27.2433	103.2954	0.2589	18.2608	0.3806	18.6414	4.8791	0.3503	5.2294		22,076.3837	22,076.3837	0.8758		22,094.7761

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	2,380.00	2,520.00	2192.50	8,109,634	8,109,634
Total	2,380.00	2,520.00	2,192.50	8,109,634	8,109,634

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513125	0.060112	0.180262	0.139218	0.042100	0.006630	0.016061	0.030999	0.001941	0.002506	0.004348	0.000594	0.002104

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.2134	1.8232	0.7758	0.0116		0.1474	0.1474		0.1474	0.1474		2,327.4376	2,327.4376	0.0446	0.0427	2,341.6020
NaturalGas Unmitigated	0.2134	1.8232	0.7758	0.0116		0.1474	0.1474		0.1474	0.1474		2,327.4376	2,327.4376	0.0446	0.0427	2,341.6020

5.2 Energy by Land Use - NaturalGas

Unmitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Single Family Housing	19783.2	0.2134	1.8232	0.7758	0.0116		0.1474	0.1474		0.1474	0.1474		2,327.4376	2,327.4376	0.0446	0.0427	2,341.6020
Total		0.2134	1.8232	0.7758	0.0116		0.1474	0.1474		0.1474	0.1474		2,327.4376	2,327.4376	0.0446	0.0427	2,341.6020

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Single Family Housing	19.7832	0.2134	1.8232	0.7758	0.0116		0.1474	0.1474		0.1474	0.1474		2,327.4376	2,327.4376	0.0446	0.0427	2,341.6020
Total		0.2134	1.8232	0.7758	0.0116		0.1474	0.1474		0.1474	0.1474		2,327.4376	2,327.4376	0.0446	0.0427	2,341.6020

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Category	lb/day								lb/day							
Mitigated	11.0083	0.2429	20.8596	1.0900e-003		0.4484	0.4484		0.4449	0.4449	0.0000	5,331.2557	5,331.2557	0.1388	0.0971	5,364.2576
Unmitigated	11.0083	0.2429	20.8596	1.0900e-003		0.4484	0.4484		0.4449	0.4449	0.0000	5,331.2557	5,331.2557	0.1388	0.0971	5,364.2576

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.9643					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	8.9100					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.4853	2.0000e-005	0.0265	0.0000		0.3353	0.3353		0.3318	0.3318	0.0000	5,294.1177	5,294.1177	0.1015	0.0971	5,326.3368
Landscaping	0.6487	0.2428	20.8331	1.0900e-003		0.1131	0.1131		0.1131	0.1131		37.1381	37.1381	0.0373		37.9209
Total	11.0082	0.2429	20.8596	1.0900e-003		0.4484	0.4484		0.4449	0.4449	0.0000	5,331.2557	5,331.2557	0.1387	0.0971	5,364.2576

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.9643					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	8.9100					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000

Hearth	0.4853	2.0000e-005	0.0265	0.0000		0.3353	0.3353		0.3318	0.3318	0.0000	5,294.1177	5,294.1177	0.1015	0.0971	5,326.3368
Landscaping	0.6487	0.2428	20.8331	1.0900e-003		0.1131	0.1131		0.1131	0.1131		37.1381	37.1381	0.0373		37.9209
Total	11.0082	0.2429	20.8596	1.0900e-003		0.4484	0.4484		0.4449	0.4449	0.0000	5,331.2557	5,331.2557	0.1387	0.0971	5,364.2576

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Vegetation

Baker Ranch
South Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	250.00	Dwelling Unit	30.00	450,000.00	715

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	8			Operational Year	2017
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Site is 30 acres.

Construction Phase - Schedule estimated from site plan, assuming architectural coatings will be applied during building construction phase and a 2017

Demolition -

Grading -

Vehicle Trips - Weekday trip rate from traffic study, left Saturday and Sunday rates at CalEEMod defaults.

Woodstoves - Only gas fireplaces allowed, assumed all residences would have a fireplace.

Sequestration - Assuming trees would be added to site, estimating 50.

Construction Off-road Equipment Mitigation - Dust control measures as required by SCAQMD Rule 403.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	35.00	345.00

tblConstructionPhase	NumDays	440.00	522.00
tblConstructionPhase	NumDays	30.00	20.00
tblConstructionPhase	PhaseEndDate	8/24/2018	4/30/2017
tblConstructionPhase	PhaseEndDate	4/28/2017	4/30/2017
tblConstructionPhase	PhaseStartDate	5/1/2017	1/2/2016
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	212.50	250.00
tblFireplaces	NumberNoFireplace	25.00	0.00
tblFireplaces	NumberWood	12.50	0.00
tblGrading	MaterialExported	0.00	17,360.00
tblGrading	MaterialExported	0.00	10,000.00
tblLandUse	LotAcreage	81.17	30.00
tblProjectCharacteristics	OperationalYear	2014	2017
tblSequestration	NumberOfNewTrees	0.00	50.00
tblVehicleTrips	WD_TR	9.57	9.52
tblWoodstoves	NumberCatalytic	12.50	0.00
tblWoodstoves	NumberNoncatalytic	12.50	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2015	0.6705	6.3551	4.8805	7.5300e-003	0.5274	0.3415	0.8689	0.2197	0.3183	0.5380	0.0000	681.5792	681.5792	0.1212	0.0000	684.1253

2016	1.9065	4.4313	3.9334	6.5500e-003	0.1762	0.2886	0.4648	0.0472	0.2726	0.3198	0.0000	563.4829	563.4829	0.0906	0.0000	565.3852
2017	0.6397	1.6909	1.5025	2.5600e-003	0.0603	0.1049	0.1652	0.0162	0.0985	0.1147	0.0000	219.0752	219.0752	0.0399	0.0000	219.9137
Total	3.2168	12.4772	10.3164	0.0166	0.7639	0.7350	1.4989	0.2831	0.6894	0.9725	0.0000	1,464.1373	1,464.1373	0.2518	0.0000	1,469.4243

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2015	0.6705	6.3551	4.8805	7.5300e-003	0.2912	0.3415	0.6327	0.1087	0.3183	0.4270	0.0000	681.5787	681.5787	0.1212	0.0000	684.1248
2016	1.9065	4.4313	3.9334	6.5500e-003	0.1762	0.2886	0.4648	0.0472	0.2726	0.3198	0.0000	563.4825	563.4825	0.0906	0.0000	565.3848
2017	0.6397	1.6909	1.5025	2.5600e-003	0.0603	0.1049	0.1652	0.0162	0.0985	0.1147	0.0000	219.0750	219.0750	0.0399	0.0000	219.9135
Total	3.2168	12.4772	10.3164	0.0166	0.5277	0.7350	1.2627	0.1721	0.6894	0.8615	0.0000	1,464.1362	1,464.1362	0.2518	0.0000	1,469.4232

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	30.92	0.00	15.76	39.21	0.00	11.41	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.8892	0.0304	2.6045	1.4000e-004		0.0183	0.0183		0.0183	0.0183	0.0000	64.2457	64.2457	5.3800e-003	1.1000e-003	64.6998

Energy	0.0389	0.3327	0.1416	2.1200e-003		0.0269	0.0269		0.0269	0.0269	0.0000	892.5406	892.5406	0.0307	0.0119	896.8706
Mobile	1.4979	4.7620	17.8950	0.0449	3.0730	0.0650	3.1380	0.8223	0.0598	0.8821	0.0000	3,470.5132	3,470.5132	0.1360	0.0000	3,473.3683
Waste						0.0000	0.0000		0.0000	0.0000	59.5068	0.0000	59.5068	3.5168	0.0000	133.3586
Water						0.0000	0.0000		0.0000	0.0000	5.1676	93.3418	98.5094	0.5351	0.0134	113.9057
Total	3.4260	5.1251	20.6410	0.0472	3.0730	0.1102	3.1832	0.8223	0.1050	0.9273	64.6744	4,520.6412	4,585.3156	4.2238	0.0264	4,682.2030

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.8892	0.0304	2.6045	1.4000e-004		0.0183	0.0183		0.0183	0.0183	0.0000	64.2457	64.2457	5.3800e-003	1.1000e-003	64.6998
Energy	0.0389	0.3327	0.1416	2.1200e-003		0.0269	0.0269		0.0269	0.0269	0.0000	892.5406	892.5406	0.0307	0.0119	896.8706
Mobile	1.4979	4.7620	17.8950	0.0449	3.0730	0.0650	3.1380	0.8223	0.0598	0.8821	0.0000	3,470.5132	3,470.5132	0.1360	0.0000	3,473.3683
Waste						0.0000	0.0000		0.0000	0.0000	59.5068	0.0000	59.5068	3.5168	0.0000	133.3586
Water						0.0000	0.0000		0.0000	0.0000	5.1676	93.3418	98.5094	0.5350	0.0134	113.8974
Total	3.4260	5.1251	20.6410	0.0472	3.0730	0.1102	3.1832	0.8223	0.1050	0.9273	64.6744	4,520.6412	4,585.3156	4.2237	0.0264	4,682.1948

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00

2.3 Vegetation

Vegetation

	CO2e
Category	MT
New Trees	35.4000
Total	35.4000

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2015	1/28/2015	5	20	
2	Site Preparation	Site Preparation	1/29/2015	2/25/2015	5	20	
3	Grading	Grading	2/26/2015	4/29/2015	5	45	
4	Building Construction	Building Construction	4/30/2015	4/30/2017	5	522	
5	Architectural Coating	Architectural Coating	1/2/2016	4/30/2017	5	345	
6	Paving	Paving	5/1/2017	6/16/2017	5	35	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 112.5

Acres of Paving: 0

Residential Indoor: 911,250; Residential Outdoor: 303,750; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	162	0.38

Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	255	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	162	0.38
Grading	Graders	1	8.00	174	0.41
Grading	Rubber Tired Dozers	1	8.00	255	0.40
Grading	Scrapers	2	8.00	361	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	226	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Paving	Pavers	2	8.00	125	0.42
Paving	Paving Equipment	2	8.00	130	0.36
Paving	Rollers	2	8.00	80	0.38

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	91.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	1,250.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	2,170.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	90.00	27.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

3.2 Demolition - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					9.8400e-003	0.0000	9.8400e-003	1.4900e-003	0.0000	1.4900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0451	0.4836	0.3607	4.0000e-004		0.0245	0.0245		0.0229	0.0229	0.0000	37.4413	37.4413	0.0102	0.0000	37.6544
Total	0.0451	0.4836	0.3607	4.0000e-004	9.8400e-003	0.0245	0.0344	1.4900e-003	0.0229	0.0244	0.0000	37.4413	37.4413	0.0102	0.0000	37.6544

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	9.3000e-004	0.0150	0.0107	3.0000e-005	7.8000e-004	2.4000e-004	1.0200e-003	2.1000e-004	2.2000e-004	4.4000e-004	0.0000	3.1027	3.1027	2.0000e-005	0.0000	3.1032
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.7000e-004	9.8000e-004	0.0102	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.5970	1.5970	9.0000e-005	0.0000	1.5989
Total	1.6000e-003	0.0160	0.0209	5.0000e-005	2.4300e-003	2.5000e-004	2.6800e-003	6.5000e-004	2.3000e-004	8.9000e-004	0.0000	4.6998	4.6998	1.1000e-004	0.0000	4.7022

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					3.8400e-003	0.0000	3.8400e-003	5.8000e-004	0.0000	5.8000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0451	0.4836	0.3607	4.0000e-004		0.0245	0.0245		0.0229	0.0229	0.0000	37.4412	37.4412	0.0102	0.0000	37.6544
Total	0.0451	0.4836	0.3607	4.0000e-004	3.8400e-003	0.0245	0.0284	5.8000e-004	0.0229	0.0234	0.0000	37.4412	37.4412	0.0102	0.0000	37.6544

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	9.3000e-004	0.0150	0.0107	3.0000e-005	7.8000e-004	2.4000e-004	1.0200e-003	2.1000e-004	2.2000e-004	4.4000e-004	0.0000	3.1027	3.1027	2.0000e-005	0.0000	3.1032
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	6.7000e-004	9.8000e-004	0.0102	2.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.5970	1.5970	9.0000e-005	0.0000	1.5989
Total	1.6000e-003	0.0160	0.0209	5.0000e-005	2.4300e-003	2.5000e-004	2.6800e-003	6.5000e-004	2.3000e-004	8.9000e-004	0.0000	4.6998	4.6998	1.1000e-004	0.0000	4.7022

3.3 Site Preparation - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Fugitive Dust					0.1812	0.0000	0.1812	0.0994	0.0000	0.0994	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0526	0.5689	0.4263	3.9000e-004		0.0309	0.0309		0.0284	0.0284	0.0000	37.3011	37.3011	0.0111	0.0000	37.5350
Total	0.0526	0.5689	0.4263	3.9000e-004	0.1812	0.0309	0.2121	0.0994	0.0284	0.1278	0.0000	37.3011	37.3011	0.0111	0.0000	37.5350

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0127	0.2066	0.1467	4.6000e-004	0.0107	3.3500e-003	0.0141	2.9400e-003	3.0800e-003	6.0200e-003	0.0000	42.6199	42.6199	3.4000e-004	0.0000	42.6270
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-004	1.1700e-003	0.0122	2.0000e-005	1.9700e-003	2.0000e-005	1.9900e-003	5.2000e-004	2.0000e-005	5.4000e-004	0.0000	1.9165	1.9165	1.1000e-004	0.0000	1.9187
Total	0.0135	0.2078	0.1589	4.8000e-004	0.0127	3.3700e-003	0.0161	3.4600e-003	3.1000e-003	6.5600e-003	0.0000	44.5363	44.5363	4.5000e-004	0.0000	44.5457

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0707	0.0000	0.0707	0.0388	0.0000	0.0388	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0526	0.5689	0.4263	3.9000e-004		0.0309	0.0309		0.0284	0.0284	0.0000	37.3011	37.3011	0.0111	0.0000	37.5349
Total	0.0526	0.5689	0.4263	3.9000e-004	0.0707	0.0309	0.1016	0.0388	0.0284	0.0672	0.0000	37.3011	37.3011	0.0111	0.0000	37.5349

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0127	0.2066	0.1467	4.6000e-004	0.0107	3.3500e-003	0.0141	2.9400e-003	3.0800e-003	6.0200e-003	0.0000	42.6199	42.6199	3.4000e-004	0.0000	42.6270
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	8.0000e-004	1.1700e-003	0.0122	2.0000e-005	1.9700e-003	2.0000e-005	1.9900e-003	5.2000e-004	2.0000e-005	5.4000e-004	0.0000	1.9165	1.9165	1.1000e-004	0.0000	1.9187
Total	0.0135	0.2078	0.1589	4.8000e-004	0.0127	3.3700e-003	0.0161	3.4600e-003	3.1000e-003	6.5600e-003	0.0000	44.5363	44.5363	4.5000e-004	0.0000	44.5457

3.4 Grading - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1961	0.0000	0.1961	0.0811	0.0000	0.0811	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1524	1.7786	1.1439	1.3900e-003		0.0856	0.0856		0.0787	0.0787	0.0000	132.3950	132.3950	0.0395	0.0000	133.2250
Total	0.1524	1.7786	1.1439	1.3900e-003	0.1961	0.0856	0.2817	0.0811	0.0787	0.1598	0.0000	132.3950	132.3950	0.0395	0.0000	133.2250

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Category	tons/yr										MT/yr					
Hauling	0.0221	0.3587	0.2547	8.0000e-004	0.0186	5.8200e-003	0.0244	5.1000e-003	5.3500e-003	0.0105	0.0000	73.9881	73.9881	5.9000e-004	0.0000	74.0005
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-003	2.9400e-003	0.0305	6.0000e-005	4.9400e-003	4.0000e-005	4.9800e-003	1.3100e-003	4.0000e-005	1.3500e-003	0.0000	4.7911	4.7911	2.7000e-004	0.0000	4.7968
Total	0.0241	0.3616	0.2852	8.6000e-004	0.0235	5.8600e-003	0.0294	6.4100e-003	5.3900e-003	0.0118	0.0000	78.7792	78.7792	8.6000e-004	0.0000	78.7973

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0765	0.0000	0.0765	0.0316	0.0000	0.0316	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1524	1.7786	1.1439	1.3900e-003		0.0856	0.0856		0.0787	0.0787	0.0000	132.3948	132.3948	0.0395	0.0000	133.2249
Total	0.1524	1.7786	1.1439	1.3900e-003	0.0765	0.0856	0.1620	0.0316	0.0787	0.1103	0.0000	132.3948	132.3948	0.0395	0.0000	133.2249

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0221	0.3587	0.2547	8.0000e-004	0.0186	5.8200e-003	0.0244	5.1000e-003	5.3500e-003	0.0105	0.0000	73.9881	73.9881	5.9000e-004	0.0000	74.0005
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.0000e-003	2.9400e-003	0.0305	6.0000e-005	4.9400e-003	4.0000e-005	4.9800e-003	1.3100e-003	4.0000e-005	1.3500e-003	0.0000	4.7911	4.7911	2.7000e-004	0.0000	4.7968

Total	0.0241	0.3616	0.2852	8.6000e-004	0.0235	5.8600e-003	0.0294	6.4100e-003	5.3900e-003	0.0118	0.0000	78.7792	78.7792	8.6000e-004	0.0000	78.7973
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3.5 Building Construction - 2015

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3220	2.6426	1.6495	2.3600e-003		0.1863	0.1863		0.1752	0.1752	0.0000	214.7150	214.7150	0.0539	0.0000	215.8463
Total	0.3220	2.6426	1.6495	2.3600e-003		0.1863	0.1863		0.1752	0.1752	0.0000	214.7150	214.7150	0.0539	0.0000	215.8463

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0240	0.2442	0.2979	5.2000e-004	0.0146	4.0600e-003	0.0187	4.1700e-003	3.7300e-003	7.9000e-003	0.0000	47.3880	47.3880	3.8000e-004	0.0000	47.3959
Worker	0.0353	0.0517	0.5371	1.0700e-003	0.0869	7.8000e-004	0.0877	0.0231	7.1000e-004	0.0238	0.0000	84.3236	84.3236	4.7600e-003	0.0000	84.4236
Total	0.0592	0.2959	0.8350	1.5900e-003	0.1015	4.8400e-003	0.1063	0.0273	4.4400e-003	0.0317	0.0000	131.7115	131.7115	5.1400e-003	0.0000	131.8195

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3220	2.6426	1.6495	2.3600e-003		0.1863	0.1863		0.1752	0.1752	0.0000	214.7148	214.7148	0.0539	0.0000	215.8461
Total	0.3220	2.6426	1.6495	2.3600e-003		0.1863	0.1863		0.1752	0.1752	0.0000	214.7148	214.7148	0.0539	0.0000	215.8461

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0240	0.2442	0.2979	5.2000e-004	0.0146	4.0600e-003	0.0187	4.1700e-003	3.7300e-003	7.9000e-003	0.0000	47.3880	47.3880	3.8000e-004	0.0000	47.3959
Worker	0.0353	0.0517	0.5371	1.0700e-003	0.0869	7.8000e-004	0.0877	0.0231	7.1000e-004	0.0238	0.0000	84.3236	84.3236	4.7600e-003	0.0000	84.4236
Total	0.0592	0.2959	0.8350	1.5900e-003	0.1015	4.8400e-003	0.1063	0.0273	4.4400e-003	0.0317	0.0000	131.7115	131.7115	5.1400e-003	0.0000	131.8195

3.5 Building Construction - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Off-Road	0.4445	3.7201	2.4151	3.5000e-003		0.2567	0.2567		0.2412	0.2412	0.0000	316.0104	316.0104	0.0784	0.0000	317.6563
Total	0.4445	3.7201	2.4151	3.5000e-003		0.2567	0.2567		0.2412	0.2412	0.0000	316.0104	316.0104	0.0784	0.0000	317.6563

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0314	0.3199	0.4106	7.7000e-004	0.0217	4.9900e-003	0.0267	6.1900e-003	4.5900e-003	0.0108	0.0000	69.5007	69.5007	5.1000e-004	0.0000	69.5114
Worker	0.0471	0.0692	0.7194	1.5800e-003	0.1289	1.1000e-003	0.1300	0.0342	1.0100e-003	0.0352	0.0000	120.7266	120.7266	6.5000e-003	0.0000	120.8631
Total	0.0784	0.3890	1.1300	2.3500e-003	0.1505	6.0900e-003	0.1566	0.0404	5.6000e-003	0.0460	0.0000	190.2274	190.2274	7.0100e-003	0.0000	190.3744

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.4445	3.7201	2.4151	3.5000e-003		0.2567	0.2567		0.2412	0.2412	0.0000	316.0101	316.0101	0.0784	0.0000	317.6560
Total	0.4445	3.7201	2.4151	3.5000e-003		0.2567	0.2567		0.2412	0.2412	0.0000	316.0101	316.0101	0.0784	0.0000	317.6560

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0314	0.3199	0.4106	7.7000e-004	0.0217	4.9900e-003	0.0267	6.1900e-003	4.5900e-003	0.0108	0.0000	69.5007	69.5007	5.1000e-004	0.0000	69.5114
Worker	0.0471	0.0692	0.7194	1.5800e-003	0.1289	1.1000e-003	0.1300	0.0342	1.0100e-003	0.0352	0.0000	120.7266	120.7266	6.5000e-003	0.0000	120.8631
Total	0.0784	0.3890	1.1300	2.3500e-003	0.1505	6.0900e-003	0.1566	0.0404	5.6000e-003	0.0460	0.0000	190.2274	190.2274	7.0100e-003	0.0000	190.3744

3.5 Building Construction - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1319	1.1222	0.7705	1.1400e-003		0.0757	0.0757		0.0711	0.0711	0.0000	101.7786	101.7786	0.0251	0.0000	102.3047
Total	0.1319	1.1222	0.7705	1.1400e-003		0.0757	0.0757		0.0711	0.0711	0.0000	101.7786	101.7786	0.0251	0.0000	102.3047

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.3400e-003	0.0948	0.1267	2.5000e-004	7.0600e-003	1.4500e-003	8.5100e-003	2.0200e-003	1.3300e-003	3.3500e-003	0.0000	22.2679	22.2679	1.6000e-004	0.0000	22.2712
Worker	0.0137	0.0203	0.2114	5.2000e-004	0.0420	3.4000e-004	0.0423	0.0111	3.2000e-004	0.0115	0.0000	37.8077	37.8077	1.9500e-003	0.0000	37.8487
Total	0.0231	0.1151	0.3381	7.7000e-004	0.0490	1.7900e-003	0.0508	0.0132	1.6500e-003	0.0148	0.0000	60.0756	60.0756	2.1100e-003	0.0000	60.1200

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1319	1.1222	0.7705	1.1400e-003		0.0757	0.0757		0.0711	0.0711	0.0000	101.7785	101.7785	0.0251	0.0000	102.3045
Total	0.1319	1.1222	0.7705	1.1400e-003		0.0757	0.0757		0.0711	0.0711	0.0000	101.7785	101.7785	0.0251	0.0000	102.3045

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.3400e-003	0.0948	0.1267	2.5000e-004	7.0600e-003	1.4500e-003	8.5100e-003	2.0200e-003	1.3300e-003	3.3500e-003	0.0000	22.2679	22.2679	1.6000e-004	0.0000	22.2712
Worker	0.0137	0.0203	0.2114	5.2000e-004	0.0420	3.4000e-004	0.0423	0.0111	3.2000e-004	0.0115	0.0000	37.8077	37.8077	1.9500e-003	0.0000	37.8487

Total	0.0231	0.1151	0.3381	7.7000e-004	0.0490	1.7900e-003	0.0508	0.0132	1.6500e-003	0.0148	0.0000	60.0756	60.0756	2.1100e-003	0.0000	60.1200
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3.6 Architectural Coating - 2016

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.3263					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0479	0.3084	0.2449	3.9000e-004		0.0256	0.0256		0.0256	0.0256	0.0000	33.1923	33.1923	3.9100e-003	0.0000	33.2745
Total	1.3742	0.3084	0.2449	3.9000e-004		0.0256	0.0256		0.0256	0.0256	0.0000	33.1923	33.1923	3.9100e-003	0.0000	33.2745

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.3800e-003	0.0138	0.1433	3.2000e-004	0.0257	2.2000e-004	0.0259	6.8200e-003	2.0000e-004	7.0200e-003	0.0000	24.0528	24.0528	1.2900e-003	0.0000	24.0800
Total	9.3800e-003	0.0138	0.1433	3.2000e-004	0.0257	2.2000e-004	0.0259	6.8200e-003	2.0000e-004	7.0200e-003	0.0000	24.0528	24.0528	1.2900e-003	0.0000	24.0800

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	1.3263					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0479	0.3084	0.2449	3.9000e-004		0.0256	0.0256		0.0256	0.0256	0.0000	33.1923	33.1923	3.9100e-003	0.0000	33.2744
Total	1.3742	0.3084	0.2449	3.9000e-004		0.0256	0.0256		0.0256	0.0256	0.0000	33.1923	33.1923	3.9100e-003	0.0000	33.2744

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.3800e-003	0.0138	0.1433	3.2000e-004	0.0257	2.2000e-004	0.0259	6.8200e-003	2.0000e-004	7.0200e-003	0.0000	24.0528	24.0528	1.2900e-003	0.0000	24.0800
Total	9.3800e-003	0.0138	0.1433	3.2000e-004	0.0257	2.2000e-004	0.0259	6.8200e-003	2.0000e-004	7.0200e-003	0.0000	24.0528	24.0528	1.2900e-003	0.0000	24.0800

3.6 Architectural Coating - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					

Archit. Coating	0.4336					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0141	0.0929	0.0794	1.3000e-004		7.3700e-003	7.3700e-003		7.3700e-003	7.3700e-003	0.0000	10.8513	10.8513	1.1500e-003	0.0000	10.8754
Total	0.4477	0.0929	0.0794	1.3000e-004		7.3700e-003	7.3700e-003		7.3700e-003	7.3700e-003	0.0000	10.8513	10.8513	1.1500e-003	0.0000	10.8754

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7500e-003	4.0700e-003	0.0423	1.0000e-004	8.3900e-003	7.0000e-005	8.4600e-003	2.2300e-003	6.0000e-005	2.2900e-003	0.0000	7.5615	7.5615	3.9000e-004	0.0000	7.5697
Total	2.7500e-003	4.0700e-003	0.0423	1.0000e-004	8.3900e-003	7.0000e-005	8.4600e-003	2.2300e-003	6.0000e-005	2.2900e-003	0.0000	7.5615	7.5615	3.9000e-004	0.0000	7.5697

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.4336					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0141	0.0929	0.0794	1.3000e-004		7.3700e-003	7.3700e-003		7.3700e-003	7.3700e-003	0.0000	10.8513	10.8513	1.1500e-003	0.0000	10.8754
Total	0.4477	0.0929	0.0794	1.3000e-004		7.3700e-003	7.3700e-003		7.3700e-003	7.3700e-003	0.0000	10.8513	10.8513	1.1500e-003	0.0000	10.8754

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.7500e-003	4.0700e-003	0.0423	1.0000e-004	8.3900e-003	7.0000e-005	8.4600e-003	2.2300e-003	6.0000e-005	2.2900e-003	0.0000	7.5615	7.5615	3.9000e-004	0.0000	7.5697
Total	2.7500e-003	4.0700e-003	0.0423	1.0000e-004	8.3900e-003	7.0000e-005	8.4600e-003	2.2300e-003	6.0000e-005	2.2900e-003	0.0000	7.5615	7.5615	3.9000e-004	0.0000	7.5697

3.7 Paving - 2017

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0334	0.3552	0.2577	3.9000e-004		0.0199	0.0199		0.0183	0.0183	0.0000	36.2135	36.2135	0.0111	0.0000	36.4465
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0334	0.3552	0.2577	3.9000e-004		0.0199	0.0199		0.0183	0.0183	0.0000	36.2135	36.2135	0.0111	0.0000	36.4465

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.4000e-004	1.4000e-003	0.0145	4.0000e-005	2.8800e-003	2.0000e-005	2.9000e-003	7.6000e-004	2.0000e-005	7.9000e-004	0.0000	2.5947	2.5947	1.3000e-004	0.0000	2.5975
Total	9.4000e-004	1.4000e-003	0.0145	4.0000e-005	2.8800e-003	2.0000e-005	2.9000e-003	7.6000e-004	2.0000e-005	7.9000e-004	0.0000	2.5947	2.5947	1.3000e-004	0.0000	2.5975

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0334	0.3552	0.2577	3.9000e-004		0.0199	0.0199		0.0183	0.0183	0.0000	36.2134	36.2134	0.0111	0.0000	36.4465
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	0.0334	0.3552	0.2577	3.9000e-004		0.0199	0.0199		0.0183	0.0183	0.0000	36.2134	36.2134	0.0111	0.0000	36.4465

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.4000e-004	1.4000e-003	0.0145	4.0000e-005	2.8800e-003	2.0000e-005	2.9000e-003	7.6000e-004	2.0000e-005	7.9000e-004	0.0000	2.5947	2.5947	1.3000e-004	0.0000	2.5975

Total	9.4000e-004	1.4000e-003	0.0145	4.0000e-005	2.8800e-003	2.0000e-005	2.9000e-003	7.6000e-004	2.0000e-005	7.9000e-004	0.0000	2.5947	2.5947	1.3000e-004	0.0000	2.5975
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4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.4979	4.7620	17.8950	0.0449	3.0730	0.0650	3.1380	0.8223	0.0598	0.8821	0.0000	3,470.5132	3,470.5132	0.1360	0.0000	3,473.3683
Unmitigated	1.4979	4.7620	17.8950	0.0449	3.0730	0.0650	3.1380	0.8223	0.0598	0.8821	0.0000	3,470.5132	3,470.5132	0.1360	0.0000	3,473.3683

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	2,380.00	2,520.00	2192.50	8,109,634	8,109,634
Total	2,380.00	2,520.00	2,192.50	8,109,634	8,109,634

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.513125	0.060112	0.180262	0.139218	0.042100	0.006630	0.016061	0.030999	0.001941	0.002506	0.004348	0.000594	0.002104

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	507.2072	507.2072	0.0233	4.8200e-003	509.1922
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	507.2072	507.2072	0.0233	4.8200e-003	509.1922
NaturalGas Mitigated	0.0389	0.3327	0.1416	2.1200e-003		0.0269	0.0269		0.0269	0.0269	0.0000	385.3334	385.3334	7.3900e-003	7.0600e-003	387.6785
NaturalGas Unmitigated	0.0389	0.3327	0.1416	2.1200e-003		0.0269	0.0269		0.0269	0.0269	0.0000	385.3334	385.3334	7.3900e-003	7.0600e-003	387.6785

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	7.22088e+006	0.0389	0.3327	0.1416	2.1200e-003		0.0269	0.0269		0.0269	0.0269	0.0000	385.3334	385.3334	7.3900e-003	7.0600e-003	387.6785
Total		0.0389	0.3327	0.1416	2.1200e-003		0.0269	0.0269		0.0269	0.0269	0.0000	385.3334	385.3334	7.3900e-003	7.0600e-003	387.6785

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	7.22088e+006	0.0389	0.3327	0.1416	2.1200e-003		0.0269	0.0269		0.0269	0.0269	0.0000	385.3334	385.3334	7.3900e-003	7.0600e-003	387.6785
Total		0.0389	0.3327	0.1416	2.1200e-003		0.0269	0.0269		0.0269	0.0269	0.0000	385.3334	385.3334	7.3900e-003	7.0600e-003	387.6785

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	1.77242e+006	507.2072	0.0233	4.8200e-003	509.1922
Total		507.2072	0.0233	4.8200e-003	509.1922

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
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Land Use	kWh/yr	MT/yr			
Single Family Housing	1.77242e+006	507.2072	0.0233	4.8200e-003	509.1922
Total		507.2072	0.0233	4.8200e-003	509.1922

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.8892	0.0304	2.6045	1.4000e-004		0.0183	0.0183		0.0183	0.0183	0.0000	64.2457	64.2457	5.3800e-003	1.1000e-003	64.6998
Unmitigated	1.8892	0.0304	2.6045	1.4000e-004		0.0183	0.0183		0.0183	0.0183	0.0000	64.2457	64.2457	5.3800e-003	1.1000e-003	64.6998

6.2 Area by SubCategory

Unmitigated

[illegible]

Hearth	6.0700e-003	0.0000	3.3000e-004	0.0000		4.1900e-003	4.1900e-003		4.1500e-003	4.1500e-003	0.0000	60.0343	60.0343	1.1500e-003	1.1000e-003	60.3996
Landscaping	0.0811	0.0304	2.6041	1.4000e-004		0.0141	0.0141		0.0141	0.0141	0.0000	4.2114	4.2114	4.2300e-003	0.0000	4.3002
Total	1.8892	0.0304	2.6045	1.4000e-004		0.0183	0.0183		0.0183	0.0183	0.0000	64.2457	64.2457	5.3800e-003	1.1000e-003	64.6998

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1760					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.6261					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	6.0700e-003	0.0000	3.3000e-004	0.0000		4.1900e-003	4.1900e-003		4.1500e-003	4.1500e-003	0.0000	60.0343	60.0343	1.1500e-003	1.1000e-003	60.3996
Landscaping	0.0811	0.0304	2.6041	1.4000e-004		0.0141	0.0141		0.0141	0.0141	0.0000	4.2114	4.2114	4.2300e-003	0.0000	4.3002
Total	1.8892	0.0304	2.6045	1.4000e-004		0.0183	0.0183		0.0183	0.0183	0.0000	64.2457	64.2457	5.3800e-003	1.1000e-003	64.6998

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	98.5094	0.5350	0.0134	113.8974
Unmitigated	98.5094	0.5351	0.0134	113.9057

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	16.2885 / 10.2688	98.5094	0.5351	0.0134	113.9057
Total		98.5094	0.5351	0.0134	113.9057

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	16.2885 / 10.2688	98.5094	0.5350	0.0134	113.8974
Total		98.5094	0.5350	0.0134	113.8974

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	59.5068	3.5168	0.0000	133.3586
Unmitigated	59.5068	3.5168	0.0000	133.3586

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	293.15	59.5068	3.5168	0.0000	133.3586
Total		59.5068	3.5168	0.0000	133.3586

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			

Single Family Housing	293.15	59.5068	3.5168	0.0000	133.3586
Total		59.5068	3.5168	0.0000	133.3586

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Vegetation

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	35.4000	0.0000	0.0000	35.4000

10.2 Net New Trees

Species Class

	Number of Trees	Total CO2	CH4	N2O	CO2e
		MT			
Miscellaneous	50	35.4000	0.0000	0.0000	35.4000
Total		35.4000	0.0000	0.0000	35.4000

BAKER RANCH PROPERTIES

EXISTING NURSERY

CALEEMOD MODELING OUTPUT FILES

Baker Ranch - Existing Nursery

South Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hardware/Paint Store	50.00	1000sqft	1.15	50,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	8			Operational Year	2015
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	630.89	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - No construction

Off-road Equipment - No construction

Trips and VMT - No construction

Demolition -

Grading -

Vehicle Trips - Trip rates from traffic study

Woodstoves - Only gas fireplaces allowed, assumed all residences would have a fireplace.

Sequestration -

Construction Off-road Equipment Mitigation -

Off-road Equipment - No construction.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	OperationalYear	2014	2015
tblTripsAndVMT	WorkerTripNumber	13.00	0.00
tblVehicleTrips	ST_TR	82.52	20.60
tblVehicleTrips	SU_TR	68.65	20.60
tblVehicleTrips	WD_TR	51.29	20.60

2.0 Emissions Summary

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.3080	5.0000e-005	5.2800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0109	0.0109	3.0000e-005		0.0116
Energy	3.0300e-003	0.0275	0.0231	1.7000e-004		2.0900e-003	2.0900e-003		2.0900e-003	2.0900e-003		33.0379	33.0379	6.3000e-004	6.1000e-004	33.2389
Mobile	3.5140	7.1692	31.2845	0.0586	3.8532	0.0992	3.9524	1.0294	0.0911	1.1204		5,283.3050	5,283.3050	0.2327		5,288.1922
Total	4.8250	7.1968	31.3129	0.0588	3.8532	0.1013	3.9545	1.0294	0.0932	1.1226		5,316.3538	5,316.3538	0.2334	6.1000e-004	5,321.4427

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.3080	5.0000e-005	5.2800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0109	0.0109	3.0000e-005		0.0116
Energy	3.0300e-003	0.0275	0.0231	1.7000e-004		2.0900e-003	2.0900e-003		2.0900e-003	2.0900e-003		33.0379	33.0379	6.3000e-004	6.1000e-004	33.2389
Mobile	3.5140	7.1692	31.2845	0.0586	3.8532	0.0992	3.9524	1.0294	0.0911	1.1204		5,283.3050	5,283.3050	0.2327		5,288.1922
Total	4.8250	7.1968	31.3129	0.0588	3.8532	0.1013	3.9545	1.0294	0.0932	1.1226		5,316.3538	5,316.3538	0.2334	6.1000e-004	5,321.4427

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2014	12/31/2013	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
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Demolition	Rubber Tired Dozers	1	8.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Demolition	Concrete/Industrial Saws	1	0.00	81	0.73

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated	3.5140	7.1692	31.2845	0.0586	3.8532	0.0992	3.9524	1.0294	0.0911	1.1204		5,283.3050	5,283.3050	0.2327		5,288.1922
Mitigated	3.5140	7.1692	31.2845	0.0586	3.8532	0.0992	3.9524	1.0294	0.0911	1.1204		5,283.3050	5,283.3050	0.2327		5,288.1922

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Hardware/Paint Store	1,030.00	1,030.00	1030.00	1,817,904	1,817,904
Total	1,030.00	1,030.00	1,030.00	1,817,904	1,817,904

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Hardware/Paint Store	16.60	8.40	6.90	13.60	67.40	19.00	45	29	26

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.515437	0.060435	0.179988	0.139880	0.041945	0.006639	0.015487	0.028746	0.001918	0.002517	0.004333	0.000596	0.002079

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	3.0300e-003	0.0275	0.0231	1.7000e-004		2.0900e-003	2.0900e-003		2.0900e-003	2.0900e-003		33.0379	33.0379	6.3000e-004	6.1000e-004	33.2389
NaturalGas Unmitigated	3.0300e-003	0.0275	0.0231	1.7000e-004		2.0900e-003	2.0900e-003		2.0900e-003	2.0900e-003		33.0379	33.0379	6.3000e-004	6.1000e-004	33.2389

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Land Use	kBTU/yr	lb/day										lb/day					
Hardware/Paint Store	280.822	3.0300e-003	0.0275	0.0231	1.7000e-004		2.0900e-003	2.0900e-003		2.0900e-003	2.0900e-003		33.0379	33.0379	6.3000e-004	6.1000e-004	33.2389
Total		3.0300e-003	0.0275	0.0231	1.7000e-004		2.0900e-003	2.0900e-003		2.0900e-003	2.0900e-003		33.0379	33.0379	6.3000e-004	6.1000e-004	33.2389

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Hardware/Paint Store	0.280822	3.0300e-003	0.0275	0.0231	1.7000e-004		2.0900e-003	2.0900e-003		2.0900e-003	2.0900e-003		33.0379	33.0379	6.3000e-004	6.1000e-004	33.2389
Total		3.0300e-003	0.0275	0.0231	1.7000e-004		2.0900e-003	2.0900e-003		2.0900e-003	2.0900e-003		33.0379	33.0379	6.3000e-004	6.1000e-004	33.2389

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated	1.3080	5.0000e-005	5.2800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0109	0.0109	3.0000e-005		0.0116
Mitigated	1.3080	5.0000e-005	5.2800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0109	0.0109	3.0000e-005		0.0116

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3175					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.9900					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.2000e-004	5.0000e-005	5.2800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0109	0.0109	3.0000e-005		0.0116
Total	1.3080	5.0000e-005	5.2800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0109	0.0109	3.0000e-005		0.0116

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3175					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.9900					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.2000e-004	5.0000e-005	5.2800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0109	0.0109	3.0000e-005		0.0116
Total	1.3080	5.0000e-005	5.2800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0109	0.0109	3.0000e-005		0.0116

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Vegetation

Baker Ranch - Existing Nursery

South Coast Air Basin, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hardware/Paint Store	50.00	1000sqft	1.15	50,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	8			Operational Year	2015
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	630.89	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - No construction

Off-road Equipment - No construction

Trips and VMT - No construction

Demolition -

Grading -

Vehicle Trips - Trip rates from traffic study

Woodstoves - Only gas fireplaces allowed, assumed all residences would have a fireplace.

Sequestration -

Construction Off-road Equipment Mitigation -

Off-road Equipment - No construction.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	OperationalYear	2014	2015
tblTripsAndVMT	WorkerTripNumber	13.00	0.00
tblVehicleTrips	ST_TR	82.52	20.60
tblVehicleTrips	SU_TR	68.65	20.60
tblVehicleTrips	WD_TR	51.29	20.60

2.0 Emissions Summary

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.3080	5.0000e-005	5.2800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0109	0.0109	3.0000e-005		0.0116
Energy	3.0300e-003	0.0275	0.0231	1.7000e-004		2.0900e-003	2.0900e-003		2.0900e-003	2.0900e-003		33.0379	33.0379	6.3000e-004	6.1000e-004	33.2389
Mobile	3.6847	7.5166	32.0433	0.0557	3.8532	0.1001	3.9533	1.0294	0.0920	1.1213		5,025.6667	5,025.6667	0.2330		5,030.5595
Total	4.9958	7.5441	32.0717	0.0558	3.8532	0.1022	3.9554	1.0294	0.0941	1.1234		5,058.7155	5,058.7155	0.2337	6.1000e-004	5,063.8100

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	1.3080	5.0000e-005	5.2800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0109	0.0109	3.0000e-005		0.0116
Energy	3.0300e-003	0.0275	0.0231	1.7000e-004		2.0900e-003	2.0900e-003		2.0900e-003	2.0900e-003		33.0379	33.0379	6.3000e-004	6.1000e-004	33.2389
Mobile	3.6847	7.5166	32.0433	0.0557	3.8532	0.1001	3.9533	1.0294	0.0920	1.1213		5,025.6667	5,025.6667	0.2330		5,030.5595
Total	4.9958	7.5441	32.0717	0.0558	3.8532	0.1022	3.9554	1.0294	0.0941	1.1234		5,058.7155	5,058.7155	0.2337	6.1000e-004	5,063.8100

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2014	12/31/2013	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
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Demolition	Rubber Tired Dozers	1	8.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Demolition	Concrete/Industrial Saws	1	0.00	81	0.73

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated	3.6847	7.5166	32.0433	0.0557	3.8532	0.1001	3.9533	1.0294	0.0920	1.1213		5,025.6667	5,025.6667	0.2330		5,030.5595
Mitigated	3.6847	7.5166	32.0433	0.0557	3.8532	0.1001	3.9533	1.0294	0.0920	1.1213		5,025.6667	5,025.6667	0.2330		5,030.5595

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Hardware/Paint Store	1,030.00	1,030.00	1030.00	1,817,904	1,817,904
Total	1,030.00	1,030.00	1,030.00	1,817,904	1,817,904

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Hardware/Paint Store	16.60	8.40	6.90	13.60	67.40	19.00	45	29	26

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.515437	0.060435	0.179988	0.139880	0.041945	0.006639	0.015487	0.028746	0.001918	0.002517	0.004333	0.000596	0.002079

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	3.0300e-003	0.0275	0.0231	1.7000e-004		2.0900e-003	2.0900e-003		2.0900e-003	2.0900e-003		33.0379	33.0379	6.3000e-004	6.1000e-004	33.2389
NaturalGas Unmitigated	3.0300e-003	0.0275	0.0231	1.7000e-004		2.0900e-003	2.0900e-003		2.0900e-003	2.0900e-003		33.0379	33.0379	6.3000e-004	6.1000e-004	33.2389

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Land Use	kBTU/yr	lb/day										lb/day					
Hardware/Paint Store	280.822	3.0300e-003	0.0275	0.0231	1.7000e-004		2.0900e-003	2.0900e-003		2.0900e-003	2.0900e-003		33.0379	33.0379	6.3000e-004	6.1000e-004	33.2389
Total		3.0300e-003	0.0275	0.0231	1.7000e-004		2.0900e-003	2.0900e-003		2.0900e-003	2.0900e-003		33.0379	33.0379	6.3000e-004	6.1000e-004	33.2389

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Hardware/Paint Store	0.280822	3.0300e-003	0.0275	0.0231	1.7000e-004		2.0900e-003	2.0900e-003		2.0900e-003	2.0900e-003		33.0379	33.0379	6.3000e-004	6.1000e-004	33.2389
Total		3.0300e-003	0.0275	0.0231	1.7000e-004		2.0900e-003	2.0900e-003		2.0900e-003	2.0900e-003		33.0379	33.0379	6.3000e-004	6.1000e-004	33.2389

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated	1.3080	5.0000e-005	5.2800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0109	0.0109	3.0000e-005		0.0116
Mitigated	1.3080	5.0000e-005	5.2800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0109	0.0109	3.0000e-005		0.0116

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3175					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.9900					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.2000e-004	5.0000e-005	5.2800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0109	0.0109	3.0000e-005		0.0116
Total	1.3080	5.0000e-005	5.2800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0109	0.0109	3.0000e-005		0.0116

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3175					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.9900					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	5.2000e-004	5.0000e-005	5.2800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0109	0.0109	3.0000e-005		0.0116
Total	1.3080	5.0000e-005	5.2800e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005		0.0109	0.0109	3.0000e-005		0.0116

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Vegetation

Baker Ranch - Existing Nursery

South Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Hardware/Paint Store	50.00	1000sqft	1.15	50,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	8			Operational Year	2015
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	630.89	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - No construction

Off-road Equipment - No construction

Trips and VMT - No construction

Demolition -

Grading -

Vehicle Trips - Trip rates from traffic study

Woodstoves - Only gas fireplaces allowed, assumed all residences would have a fireplace.

Sequestration -

Construction Off-road Equipment Mitigation -

Off-road Equipment - No construction.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	OperationalYear	2014	2015
tblTripsAndVMT	WorkerTripNumber	13.00	0.00
tblVehicleTrips	ST_TR	82.52	20.60
tblVehicleTrips	SU_TR	68.65	20.60
tblVehicleTrips	WD_TR	51.29	20.60

2.0 Emissions Summary

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2387	1.0000e-005	6.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2400e-003	1.2400e-003	0.0000	0.0000	1.3200e-003
Energy	5.5000e-004	5.0200e-003	4.2200e-003	3.0000e-005		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004	0.0000	188.6166	188.6166	8.5200e-003	1.8400e-003	189.3666
Mobile	0.6301	1.3938	5.8493	0.0103	0.6885	0.0181	0.7066	0.1842	0.0166	0.2008	0.0000	839.2640	839.2640	0.0384	0.0000	840.0703
Waste						0.0000	0.0000		0.0000	0.0000	112.5504	0.0000	112.5504	6.6515	0.0000	252.2326
Water						0.0000	0.0000		0.0000	0.0000	1.1750	21.0173	22.1923	0.1217	3.0500e-003	25.6923

Total	0.8694	1.3989	5.8542	0.0103	0.6885	0.0185	0.7070	0.1842	0.0170	0.2012	113.7254	1,048.899 1	1,162.6245	6.8201	4.8900e- 003	1,307.3632
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Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.2387	1.0000e- 005	6.6000e- 004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2400e- 003	1.2400e- 003	0.0000	0.0000	1.3200e- 003
Energy	5.5000e- 004	5.0200e- 003	4.2200e- 003	3.0000e- 005		3.8000e- 004	3.8000e- 004		3.8000e- 004	3.8000e- 004	0.0000	188.6166	188.6166	8.5200e- 003	1.8400e- 003	189.3666
Mobile	0.6301	1.3938	5.8493	0.0103	0.6885	0.0181	0.7066	0.1842	0.0166	0.2008	0.0000	839.2640	839.2640	0.0384	0.0000	840.0703
Waste						0.0000	0.0000		0.0000	0.0000	112.5504	0.0000	112.5504	6.6515	0.0000	252.2326
Water						0.0000	0.0000		0.0000	0.0000	1.1750	21.0173	22.1923	0.1216	3.0400e- 003	25.6904
Total	0.8694	1.3989	5.8542	0.0103	0.6885	0.0185	0.7070	0.1842	0.0170	0.2012	113.7254	1,048.899 1	1,162.6245	6.8201	4.8800e- 003	1,307.3613

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2014	12/31/2013	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Rubber Tired Dozers	1	8.00	255	0.40
Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Demolition	Concrete/Industrial Saws	1	0.00	81	0.73

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	5	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.6301	1.3938	5.8493	0.0103	0.6885	0.0181	0.7066	0.1842	0.0166	0.2008	0.0000	839.2640	839.2640	0.0384	0.0000	840.0703
Unmitigated	0.6301	1.3938	5.8493	0.0103	0.6885	0.0181	0.7066	0.1842	0.0166	0.2008	0.0000	839.2640	839.2640	0.0384	0.0000	840.0703

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Hardware/Paint Store	1,030.00	1,030.00	1030.00	1,817,904	1,817,904
Total	1,030.00	1,030.00	1,030.00	1,817,904	1,817,904

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Hardware/Paint Store	16.60	8.40	6.90	13.60	67.40	19.00	45	29	26

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.515437	0.060435	0.179988	0.139880	0.041945	0.006639	0.015487	0.028746	0.001918	0.002517	0.004333	0.000596	0.002079

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
NaturalGas Mitigated	5.5000e-004	5.0200e-003	4.2200e-003	3.0000e-005		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004	0.0000	5.4698	5.4698	1.0000e-004	1.0000e-004	5.5031
NaturalGas Unmitigated	5.5000e-004	5.0200e-003	4.2200e-003	3.0000e-005		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004	0.0000	5.4698	5.4698	1.0000e-004	1.0000e-004	5.5031
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	183.1468	183.1468	8.4200e-003	1.7400e-003	183.8636
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	183.1468	183.1468	8.4200e-003	1.7400e-003	183.8636

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Hardware/Paint Store	102500	5.5000e-004	5.0200e-003	4.2200e-003	3.0000e-005		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004	0.0000	5.4698	5.4698	1.0000e-004	1.0000e-004	5.5031
Total		5.5000e-004	5.0200e-003	4.2200e-003	3.0000e-005		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004	0.0000	5.4698	5.4698	1.0000e-004	1.0000e-004	5.5031

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Hardware/Paint Store	102500	5.5000e-004	5.0200e-003	4.2200e-003	3.0000e-005		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004	0.0000	5.4698	5.4698	1.0000e-004	1.0000e-004	5.5031
Total		5.5000e-004	5.0200e-003	4.2200e-003	3.0000e-005		3.8000e-004	3.8000e-004		3.8000e-004	3.8000e-004	0.0000	5.4698	5.4698	1.0000e-004	1.0000e-004	5.5031

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Hardware/Paint Store	640000	183.1468	8.4200e-003	1.7400e-003	183.8636
Total		183.1468	8.4200e-003	1.7400e-003	183.8636

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Hardware/Paint Store	640000	183.1468	8.4200e-003	1.7400e-003	183.8636
Total		183.1468	8.4200e-003	1.7400e-003	183.8636

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.2387	1.0000e-005	6.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2400e-003	1.2400e-003	0.0000	0.0000	1.3200e-003

Unmitigated	0.2387	1.0000e-005	6.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2400e-003	1.2400e-003	0.0000	0.0000	1.3200e-003
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6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0579					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1807					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	7.0000e-005	1.0000e-005	6.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2400e-003	1.2400e-003	0.0000	0.0000	1.3200e-003
Total	0.2387	1.0000e-005	6.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2400e-003	1.2400e-003	0.0000	0.0000	1.3200e-003

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0579					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.1807					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	7.0000e-005	1.0000e-005	6.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2400e-003	1.2400e-003	0.0000	0.0000	1.3200e-003
Total	0.2387	1.0000e-005	6.6000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	1.2400e-003	1.2400e-003	0.0000	0.0000	1.3200e-003

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Unmitigated	22.1923	0.1217	3.0500e-003	25.6923
Mitigated	22.1923	0.1216	3.0400e-003	25.6904

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Hardware/Paint Store	3.70363 / 2.26996	22.1923	0.1217	3.0500e-003	25.6923
Total		22.1923	0.1217	3.0500e-003	25.6923

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
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Land Use	Mgal	MT/yr			
Hardware/Paint Store	3.70363 / 2.26996	22.1923	0.1216	3.0400e-003	25.6904
Total		22.1923	0.1216	3.0400e-003	25.6904

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	112.5504	6.6515	0.0000	252.2326
Unmitigated	112.5504	6.6515	0.0000	252.2326

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Hardware/Paint Store	554.46	112.5504	6.6515	0.0000	252.2326

Total		112.5504	6.6515	0.0000	252.2326
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Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Hardware/Paint Store	554.46	112.5504	6.6515	0.0000	252.2326
Total		112.5504	6.6515	0.0000	252.2326

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Vegetation

BAKER RANCH PROPERTIES

PROPOSED 250 RESIDENCES – 2030

CALEEMOD MODELING OUTPUT FILES

Baker Ranch

South Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	250.00	Dwelling Unit	30.00	450,000.00	715

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	8			Operational Year	2030
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Site is 30 acres.

Construction Phase - No construction

Off-road Equipment - No construction

Trips and VMT - No construction

Demolition -

Grading -

Vehicle Trips - Weekday trip rate from traffic study, left Saturday and Sunday rates at CalEEMod defaults.

Woodstoves - Only gas fireplaces allowed, assumed all residences would have a fireplace.

Sequestration - Assuming trees would be added to site, estimating 50.

Construction Off-road Equipment Mitigation -

Off-road Equipment - No construction

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	30.00	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	212.50	250.00
tblFireplaces	NumberNoFireplace	25.00	0.00
tblFireplaces	NumberWood	12.50	0.00
tblLandUse	LotAcreage	81.17	30.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	OperationalYear	2014	2030
tblSequestration	NumberOfNewTrees	0.00	50.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblVehicleTrips	WD_TR	9.57	9.52
tblWoodstoves	NumberCatalytic	12.50	0.00
tblWoodstoves	NumberNoncatalytic	12.50	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
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Category	lb/day										lb/day					
Area	10.9749	0.2372	20.5973	1.0900e-003		0.4497	0.4497		0.4462	0.4462	0.0000	5,331.2557	5,331.2557	0.1369	0.0971	5,364.2179
Energy	0.2134	1.8232	0.7758	0.0116		0.1474	0.1474		0.1474	0.1474		2,327.4376	2,327.4376	0.0446	0.0427	2,341.6020
Mobile	5.4839	13.0733	62.1075	0.2798	18.2877	0.3601	18.6478	4.8886	0.3323	5.2209		20,073.7695	20,073.7695	0.5443		20,085.2003
Total	16.6722	15.1336	83.4806	0.2926	18.2877	0.9572	19.2449	4.8886	0.9258	5.8144	0.0000	27,732.4628	27,732.4628	0.7258	0.1397	27,791.0201

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	10.9749	0.2372	20.5973	1.0900e-003		0.4497	0.4497		0.4462	0.4462	0.0000	5,331.2557	5,331.2557	0.1369	0.0971	5,364.2179
Energy	0.2134	1.8232	0.7758	0.0116		0.1474	0.1474		0.1474	0.1474		2,327.4376	2,327.4376	0.0446	0.0427	2,341.6020
Mobile	5.4839	13.0733	62.1075	0.2798	18.2877	0.3601	18.6478	4.8886	0.3323	5.2209		20,073.7695	20,073.7695	0.5443		20,085.2003
Total	16.6722	15.1336	83.4806	0.2926	18.2877	0.9572	19.2449	4.8886	0.9258	5.8144	0.0000	27,732.4628	27,732.4628	0.7258	0.1397	27,791.0201

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
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1	Demolition	Demolition	1/1/2014	12/31/2013	5	0
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Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Demolition	Concrete/Industrial Saws	1	0.00	81	0.73

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Clean Paved Roads

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Category	lb/day										lb/day			
Unmitigated	5.4839	13.0733	62.1075	0.2798	18.2877	0.3601	18.6478	4.8886	0.3323	5.2209	20,073.7695	20,073.7695	0.5443	20,085.2003
Mitigated	5.4839	13.0733	62.1075	0.2798	18.2877	0.3601	18.6478	4.8886	0.3323	5.2209	20,073.7695	20,073.7695	0.5443	20,085.2003

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	2,380.00	2,520.00	2192.50	8,109,634	8,109,634
Total	2,380.00	2,520.00	2,192.50	8,109,634	8,109,634

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.491224	0.060821	0.184988	0.143129	0.045158	0.007219	0.016964	0.038507	0.002073	0.002552	0.004110	0.000541	0.002713

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
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Category	lb/day										lb/day					
NaturalGas Mitigated	0.2134	1.8232	0.7758	0.0116		0.1474	0.1474		0.1474	0.1474		2,327.4376	2,327.4376	0.0446	0.0427	2,341.6020
NaturalGas Unmitigated	0.2134	1.8232	0.7758	0.0116		0.1474	0.1474		0.1474	0.1474		2,327.4376	2,327.4376	0.0446	0.0427	2,341.6020

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Single Family Housing	19783.2	0.2134	1.8232	0.7758	0.0116		0.1474	0.1474		0.1474	0.1474		2,327.4376	2,327.4376	0.0446	0.0427	2,341.6020
Total		0.2134	1.8232	0.7758	0.0116		0.1474	0.1474		0.1474	0.1474		2,327.4376	2,327.4376	0.0446	0.0427	2,341.6020

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Single Family Housing	19.7832	0.2134	1.8232	0.7758	0.0116		0.1474	0.1474		0.1474	0.1474		2,327.4376	2,327.4376	0.0446	0.0427	2,341.6020
Total		0.2134	1.8232	0.7758	0.0116		0.1474	0.1474		0.1474	0.1474		2,327.4376	2,327.4376	0.0446	0.0427	2,341.6020

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated	10.9749	0.2372	20.5973	1.0900e-003		0.4497	0.4497		0.4462	0.4462	0.0000	5,331.2557	5,331.2557	0.1369	0.0971	5,364.2179
Mitigated	10.9749	0.2372	20.5973	1.0900e-003		0.4497	0.4497		0.4462	0.4462	0.0000	5,331.2557	5,331.2557	0.1369	0.0971	5,364.2179

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.9643					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	8.9100					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.4853	2.0000e-005	0.0265	0.0000		0.3353	0.3353		0.3318	0.3318	0.0000	5,294.1177	5,294.1177	0.1015	0.0971	5,326.3368
Landscaping	0.6153	0.2371	20.5708	1.0900e-003		0.1144	0.1144		0.1144	0.1144		37.1381	37.1381	0.0354		37.8811
Total	10.9749	0.2372	20.5973	1.0900e-003		0.4497	0.4497		0.4461	0.4461	0.0000	5,331.2557	5,331.2557	0.1369	0.0971	5,364.2179

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.9643					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	8.9100					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.4853	2.0000e-005	0.0265	0.0000		0.3353	0.3353		0.3318	0.3318	0.0000	5,294.1177	5,294.1177	0.1015	0.0971	5,326.3368
Landscaping	0.6153	0.2371	20.5708	1.0900e-003		0.1144	0.1144		0.1144	0.1144		37.1381	37.1381	0.0354		37.8811
Total	10.9749	0.2372	20.5973	1.0900e-003		0.4497	0.4497		0.4461	0.4461	0.0000	5,331.2557	5,331.2557	0.1369	0.0971	5,364.2179

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Vegetation

Baker Ranch
South Coast Air Basin, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	250.00	Dwelling Unit	30.00	450,000.00	715

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	8			Operational Year	2030
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Site is 30 acres.

Construction Phase - No construction

Off-road Equipment - No construction

Trips and VMT - No construction

Demolition -

Grading -

Vehicle Trips - Weekday trip rate from traffic study, left Saturday and Sunday rates at CalEEMod defaults.

Woodstoves - Only gas fireplaces allowed, assumed all residences would have a fireplace.

Sequestration - Assuming trees would be added to site, estimating 50.

Construction Off-road Equipment Mitigation -

Off-road Equipment - No construction

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	30.00	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	212.50	250.00
tblFireplaces	NumberNoFireplace	25.00	0.00
tblFireplaces	NumberWood	12.50	0.00
tblLandUse	LotAcreage	81.17	30.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	OperationalYear	2014	2030
tblSequestration	NumberOfNewTrees	0.00	50.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblVehicleTrips	WD_TR	9.57	9.52
tblWoodstoves	NumberCatalytic	12.50	0.00
tblWoodstoves	NumberNoncatalytic	12.50	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
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Category	lb/day										lb/day					
Area	10.9749	0.2372	20.5973	1.0900e-003		0.4497	0.4497		0.4462	0.4462	0.0000	5,331.2557	5,331.2557	0.1369	0.0971	5,364.2179
Energy	0.2134	1.8232	0.7758	0.0116		0.1474	0.1474		0.1474	0.1474		2,327.4376	2,327.4376	0.0446	0.0427	2,341.6020
Mobile	5.6349	13.6901	61.5361	0.2658	18.2877	0.3611	18.6488	4.8886	0.3332	5.2218		19,151.7283	19,151.7283	0.5453		19,163.1798
Total	16.8231	15.7505	82.9092	0.2785	18.2877	0.9582	19.2459	4.8886	0.9268	5.8154	0.0000	26,810.4216	26,810.4216	0.7268	0.1397	26,868.9996

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	10.9749	0.2372	20.5973	1.0900e-003		0.4497	0.4497		0.4462	0.4462	0.0000	5,331.2557	5,331.2557	0.1369	0.0971	5,364.2179
Energy	0.2134	1.8232	0.7758	0.0116		0.1474	0.1474		0.1474	0.1474		2,327.4376	2,327.4376	0.0446	0.0427	2,341.6020
Mobile	5.6349	13.6901	61.5361	0.2658	18.2877	0.3611	18.6488	4.8886	0.3332	5.2218		19,151.7283	19,151.7283	0.5453		19,163.1798
Total	16.8231	15.7505	82.9092	0.2785	18.2877	0.9582	19.2459	4.8886	0.9268	5.8154	0.0000	26,810.4216	26,810.4216	0.7268	0.1397	26,868.9996

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description

1	Demolition	Demolition	1/1/2014	12/31/2013	5	0
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Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Demolition	Concrete/Industrial Saws	1	0.00	81	0.73

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Clean Paved Roads

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Category	lb/day										lb/day				
Unmitigated	5.6349	13.6901	61.5361	0.2658	18.2877	0.3611	18.6488	4.8886	0.3332	5.2218	19,151.7283	19,151.7283	0.5453		19,163.1798
Mitigated	5.6349	13.6901	61.5361	0.2658	18.2877	0.3611	18.6488	4.8886	0.3332	5.2218	19,151.7283	19,151.7283	0.5453		19,163.1798

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	2,380.00	2,520.00	2192.50	8,109,634	8,109,634
Total	2,380.00	2,520.00	2,192.50	8,109,634	8,109,634

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.491224	0.060821	0.184988	0.143129	0.045158	0.007219	0.016964	0.038507	0.002073	0.002552	0.004110	0.000541	0.002713

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
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Category	lb/day										lb/day					
NaturalGas Mitigated	0.2134	1.8232	0.7758	0.0116		0.1474	0.1474		0.1474	0.1474		2,327.4376	2,327.4376	0.0446	0.0427	2,341.6020
NaturalGas Unmitigated	0.2134	1.8232	0.7758	0.0116		0.1474	0.1474		0.1474	0.1474		2,327.4376	2,327.4376	0.0446	0.0427	2,341.6020

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Single Family Housing	19783.2	0.2134	1.8232	0.7758	0.0116		0.1474	0.1474		0.1474	0.1474		2,327.4376	2,327.4376	0.0446	0.0427	2,341.6020
Total		0.2134	1.8232	0.7758	0.0116		0.1474	0.1474		0.1474	0.1474		2,327.4376	2,327.4376	0.0446	0.0427	2,341.6020

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Single Family Housing	19.7832	0.2134	1.8232	0.7758	0.0116		0.1474	0.1474		0.1474	0.1474		2,327.4376	2,327.4376	0.0446	0.0427	2,341.6020
Total		0.2134	1.8232	0.7758	0.0116		0.1474	0.1474		0.1474	0.1474		2,327.4376	2,327.4376	0.0446	0.0427	2,341.6020

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	10.9749	0.2372	20.5973	1.0900e-003		0.4497	0.4497		0.4462	0.4462	0.0000	5,331.2557	5,331.2557	0.1369	0.0971	5,364.2179
Unmitigated	10.9749	0.2372	20.5973	1.0900e-003		0.4497	0.4497		0.4462	0.4462	0.0000	5,331.2557	5,331.2557	0.1369	0.0971	5,364.2179

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.9643					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	8.9100					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.4853	2.0000e-005	0.0265	0.0000		0.3353	0.3353		0.3318	0.3318	0.0000	5,294.1177	5,294.1177	0.1015	0.0971	5,326.3368
Landscaping	0.6153	0.2371	20.5708	1.0900e-003		0.1144	0.1144		0.1144	0.1144		37.1381	37.1381	0.0354		37.8811
Total	10.9749	0.2372	20.5973	1.0900e-003		0.4497	0.4497		0.4461	0.4461	0.0000	5,331.2557	5,331.2557	0.1369	0.0971	5,364.2179

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.9643					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	8.9100					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.4853	2.0000e-005	0.0265	0.0000		0.3353	0.3353		0.3318	0.3318	0.0000	5,294.1177	5,294.1177	0.1015	0.0971	5,326.3368
Landscaping	0.6153	0.2371	20.5708	1.0900e-003		0.1144	0.1144		0.1144	0.1144		37.1381	37.1381	0.0354		37.8811
Total	10.9749	0.2372	20.5973	1.0900e-003		0.4497	0.4497		0.4461	0.4461	0.0000	5,331.2557	5,331.2557	0.1369	0.0971	5,364.2179

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Vegetation

Baker Ranch

South Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Single Family Housing	250.00	Dwelling Unit	30.00	450,000.00	715

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	8			Operational Year	2030
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Site is 30 acres.

Construction Phase - No construction

Off-road Equipment - No construction

Trips and VMT - No construction

Demolition -

Grading -

Vehicle Trips - Weekday trip rate from traffic study, left Saturday and Sunday rates at CalEEMod defaults.

Woodstoves - Only gas fireplaces allowed, assumed all residences would have a fireplace.

Sequestration - Assuming trees would be added to site, estimating 50.

Construction Off-road Equipment Mitigation -

Off-road Equipment - No construction

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	30.00	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberGas	212.50	250.00
tblFireplaces	NumberNoFireplace	25.00	0.00
tblFireplaces	NumberWood	12.50	0.00
tblLandUse	LotAcreage	81.17	30.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	OperationalYear	2014	2030
tblSequestration	NumberOfNewTrees	0.00	50.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblVehicleTrips	WD_TR	9.57	9.52
tblWoodstoves	NumberCatalytic	12.50	0.00
tblWoodstoves	NumberNoncatalytic	12.50	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00

2.0 Emissions Summary

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
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Category	tons/yr										MT/yr					
Area	1.8850	0.0296	2.5717	1.4000e-004		0.0185	0.0185		0.0184	0.0184	0.0000	64.2457	64.2457	5.1600e-003	1.1000e-003	64.6953
Energy	0.0389	0.3327	0.1416	2.1200e-003		0.0269	0.0269		0.0269	0.0269	0.0000	892.5406	892.5406	0.0307	0.0119	896.8706
Mobile	0.9180	2.3943	10.6261	0.0461	3.0776	0.0617	3.1393	0.8239	0.0570	0.8809	0.0000	3,008.6226	3,008.6226	0.0846	0.0000	3,010.3992
Waste						0.0000	0.0000		0.0000	0.0000	59.5068	0.0000	59.5068	3.5168	0.0000	133.3586
Water						0.0000	0.0000		0.0000	0.0000	5.1676	93.3418	98.5094	0.5351	0.0134	113.9057
Total	2.8420	2.7567	13.3394	0.0483	3.0776	0.1071	3.1847	0.8239	0.1023	0.9262	64.6744	4,058.7506	4,123.4250	4.1723	0.0264	4,219.2294

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.8850	0.0296	2.5717	1.4000e-004		0.0185	0.0185		0.0184	0.0184	0.0000	64.2457	64.2457	5.1600e-003	1.1000e-003	64.6953
Energy	0.0389	0.3327	0.1416	2.1200e-003		0.0269	0.0269		0.0269	0.0269	0.0000	892.5406	892.5406	0.0307	0.0119	896.8706
Mobile	0.9180	2.3943	10.6261	0.0461	3.0776	0.0617	3.1393	0.8239	0.0570	0.8809	0.0000	3,008.6226	3,008.6226	0.0846	0.0000	3,010.3992
Waste						0.0000	0.0000		0.0000	0.0000	59.5068	0.0000	59.5068	3.5168	0.0000	133.3586
Water						0.0000	0.0000		0.0000	0.0000	5.1676	93.3418	98.5094	0.5350	0.0134	113.8974
Total	2.8420	2.7567	13.3394	0.0483	3.0776	0.1071	3.1847	0.8239	0.1023	0.9262	64.6744	4,058.7506	4,123.4250	4.1722	0.0264	4,219.2211

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08	0.00

2.3 Vegetation

Vegetation

	CO2e
Category	MT
New Trees	35.4000
Total	35.4000

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2014	12/31/2013	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Demolition	Concrete/Industrial Saws	1	0.00	81	0.73

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Clean Paved Roads

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.9180	2.3943	10.6261	0.0461	3.0776	0.0617	3.1393	0.8239	0.0570	0.8809	0.0000	3,008.6226	3,008.6226	0.0846	0.0000	3,010.3992
Unmitigated	0.9180	2.3943	10.6261	0.0461	3.0776	0.0617	3.1393	0.8239	0.0570	0.8809	0.0000	3,008.6226	3,008.6226	0.0846	0.0000	3,010.3992

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Single Family Housing	2,380.00	2,520.00	2192.50	8,109,634	8,109,634
Total	2,380.00	2,520.00	2,192.50	8,109,634	8,109,634

4.3 Trip Type Information

	Miles	Trip %	Trip Purpose %
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Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-NW	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.491224	0.060821	0.184988	0.143129	0.045158	0.007219	0.016964	0.038507	0.002073	0.002552	0.004110	0.000541	0.002713

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
NaturalGas Mitigated	0.0389	0.3327	0.1416	2.1200e-003		0.0269	0.0269		0.0269	0.0269	0.0000	385.3334	385.3334	7.3900e-003	7.0600e-003	387.6785
NaturalGas Unmitigated	0.0389	0.3327	0.1416	2.1200e-003		0.0269	0.0269		0.0269	0.0269	0.0000	385.3334	385.3334	7.3900e-003	7.0600e-003	387.6785
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	507.2072	507.2072	0.0233	4.8200e-003	509.1922
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	507.2072	507.2072	0.0233	4.8200e-003	509.1922

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	7.22088e+006	0.0389	0.3327	0.1416	2.1200e-003		0.0269	0.0269		0.0269	0.0269	0.0000	385.3334	385.3334	7.3900e-003	7.0600e-003	387.6785
Total		0.0389	0.3327	0.1416	2.1200e-003		0.0269	0.0269		0.0269	0.0269	0.0000	385.3334	385.3334	7.3900e-003	7.0600e-003	387.6785

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Single Family Housing	7.22088e+006	0.0389	0.3327	0.1416	2.1200e-003		0.0269	0.0269		0.0269	0.0269	0.0000	385.3334	385.3334	7.3900e-003	7.0600e-003	387.6785
Total		0.0389	0.3327	0.1416	2.1200e-003		0.0269	0.0269		0.0269	0.0269	0.0000	385.3334	385.3334	7.3900e-003	7.0600e-003	387.6785

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	1.77242e+006	507.2072	0.0233	4.8200e-003	509.1922
Total		507.2072	0.0233	4.8200e-003	509.1922

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Single Family Housing	1.77242e+006	507.2072	0.0233	4.8200e-003	509.1922
Total		507.2072	0.0233	4.8200e-003	509.1922

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.8850	0.0296	2.5717	1.4000e-004		0.0185	0.0185		0.0184	0.0184	0.0000	64.2457	64.2457	5.1600e-003	1.1000e-003	64.6953
Unmitigated	1.8850	0.0296	2.5717	1.4000e-004		0.0185	0.0185		0.0184	0.0184	0.0000	64.2457	64.2457	5.1600e-003	1.1000e-003	64.6953

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1760					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.6261					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	6.0700e-003	0.0000	3.3000e-004	0.0000		4.1900e-003	4.1900e-003		4.1500e-003	4.1500e-003	0.0000	60.0343	60.0343	1.1500e-003	1.1000e-003	60.3996
Landscaping	0.0769	0.0296	2.5714	1.4000e-004		0.0143	0.0143		0.0143	0.0143	0.0000	4.2114	4.2114	4.0100e-003	0.0000	4.2957
Total	1.8850	0.0296	2.5717	1.4000e-004		0.0185	0.0185		0.0185	0.0185	0.0000	64.2457	64.2457	5.1600e-003	1.1000e-003	64.6953

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.1760					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.6261					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	6.0700e-003	0.0000	3.3000e-004	0.0000		4.1900e-003	4.1900e-003		4.1500e-003	4.1500e-003	0.0000	60.0343	60.0343	1.1500e-003	1.1000e-003	60.3996
Landscaping	0.0769	0.0296	2.5714	1.4000e-004		0.0143	0.0143		0.0143	0.0143	0.0000	4.2114	4.2114	4.0100e-003	0.0000	4.2957
Total	1.8850	0.0296	2.5717	1.4000e-004		0.0185	0.0185		0.0185	0.0185	0.0000	64.2457	64.2457	5.1600e-003	1.1000e-003	64.6953

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Unmitigated	98.5094	0.5351	0.0134	113.9057
Mitigated	98.5094	0.5350	0.0134	113.8974

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	16.2885 / 10.2688	98.5094	0.5351	0.0134	113.9057
Total		98.5094	0.5351	0.0134	113.9057

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Single Family Housing	16.2885 / 10.2688	98.5094	0.5350	0.0134	113.8974
Total		98.5094	0.5350	0.0134	113.8974

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	59.5068	3.5168	0.0000	133.3586
Unmitigated	59.5068	3.5168	0.0000	133.3586

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	293.15	59.5068	3.5168	0.0000	133.3586
Total		59.5068	3.5168	0.0000	133.3586

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Single Family Housing	293.15	59.5068	3.5168	0.0000	133.3586
Total		59.5068	3.5168	0.0000	133.3586

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Vegetation

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	35.4000	0.0000	0.0000	35.4000

10.2 Net New Trees

Species Class

	Number of Trees	Total CO2	CH4	N2O	CO2e
		MT			
Miscellaneous	50	35.4000	0.0000	0.0000	35.4000
Total		35.4000	0.0000	0.0000	35.4000

BAKER RANCH PROPERTIES

PLANNED SHOPPING CENTER – 2030

CALEEMOD MODELING OUTPUT FILES

Baker Ranch - Shopping Center

South Coast Air Basin, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Regional Shopping Center	341.45	1000sqft	7.84	341,450.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	8			Operational Year	2030
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - No construction

Off-road Equipment - No construction

Trips and VMT - No construction

Demolition -

Grading -

Vehicle Trips - Used peak daily trip rate of 42.7 from traffic study for all days.

Woodstoves - Only gas fireplaces allowed, assumed all residences would have a fireplace.

Sequestration - Assuming trees would be added to site, estimating 50.

Construction Off-road Equipment Mitigation -

Off-road Equipment - No construction

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	OperationalYear	2014	2030
tblSequestration	NumberOfNewTrees	0.00	50.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblVehicleTrips	ST_TR	49.97	42.70
tblVehicleTrips	SU_TR	25.24	42.70
tblVehicleTrips	WD_TR	42.94	42.70

2.0 Emissions Summary

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	8.9319	3.1000e-004	0.0347	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004		0.0747	0.0747	1.9000e-004		0.0788
Energy	0.0207	0.1880	0.1579	1.1300e-003		0.0143	0.0143		0.0143	0.0143		225.6156	225.6156	4.3200e-003	4.1400e-003	226.9887
Mobile	27.8966	53.2932	260.3968	1.0395	66.9691	1.3753	68.3444	17.9019	1.2694	19.1712		74,583.0137	74,583.0137	2.0638		74,626.3536
Total	36.8492	53.4815	260.5894	1.0406	66.9691	1.3897	68.3588	17.9019	1.2838	19.1856		74,808.7041	74,808.7041	2.0683	4.1400e-003	74,853.4211

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	8.9319	3.1000e-004	0.0347	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004		0.0747	0.0747	1.9000e-004		0.0788
Energy	0.0207	0.1880	0.1579	1.1300e-003		0.0143	0.0143		0.0143	0.0143		225.6156	225.6156	4.3200e-003	4.1400e-003	226.9887
Mobile	27.8966	53.2932	260.3968	1.0395	66.9691	1.3753	68.3444	17.9019	1.2694	19.1712		74,583.0137	74,583.0137	2.0638		74,626.3536
Total	36.8492	53.4815	260.5894	1.0406	66.9691	1.3897	68.3588	17.9019	1.2838	19.1856		74,808.7041	74,808.7041	2.0683	4.1400e-003	74,853.4211

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2014	12/31/2013	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Demolition	Concrete/Industrial Saws	1	0.00	81	0.73

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated	27.8966	53.2932	260.3968	1.0395	66.9691	1.3753	68.3444	17.9019	1.2694	19.1712		74,583.0137	74,583.0137	2.0638		74,626.3536
Mitigated	27.8966	53.2932	260.3968	1.0395	66.9691	1.3753	68.3444	17.9019	1.2694	19.1712		74,583.0137	74,583.0137	2.0638		74,626.3536

4.2 Trip Summary Information

	Average Daily Trip Rate	Unmitigated	Mitigated
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Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Regional Shopping Center	14,579.92	14,579.92	14,579.92	31,534,081	31,534,081
Total	14,579.92	14,579.92	14,579.92	31,534,081	31,534,081

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.491224	0.060821	0.184988	0.143129	0.045158	0.007219	0.016964	0.038507	0.002073	0.002552	0.004110	0.000541	0.002713

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0207	0.1880	0.1579	1.1300e-003		0.0143	0.0143		0.0143	0.0143		225.6156	225.6156	4.3200e-003	4.1400e-003	226.9887
NaturalGas Unmitigated	0.0207	0.1880	0.1579	1.1300e-003		0.0143	0.0143		0.0143	0.0143		225.6156	225.6156	4.3200e-003	4.1400e-003	226.9887

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Regional Shopping Center	1917.73	0.0207	0.1880	0.1579	1.1300e-003		0.0143	0.0143		0.0143	0.0143		225.6156	225.6156	4.3200e-003	4.1400e-003	226.9887
Total		0.0207	0.1880	0.1579	1.1300e-003		0.0143	0.0143		0.0143	0.0143		225.6156	225.6156	4.3200e-003	4.1400e-003	226.9887

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Regional Shopping Center	1.91773	0.0207	0.1880	0.1579	1.1300e-003		0.0143	0.0143		0.0143	0.0143		225.6156	225.6156	4.3200e-003	4.1400e-003	226.9887
Total		0.0207	0.1880	0.1579	1.1300e-003		0.0143	0.0143		0.0143	0.0143		225.6156	225.6156	4.3200e-003	4.1400e-003	226.9887

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Category	lb/day										lb/day				
Unmitigated	8.9319	3.1000e-004	0.0347	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004		0.0747	0.0747	1.9000e-004	0.0788
Mitigated	8.9319	3.1000e-004	0.0347	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004		0.0747	0.0747	1.9000e-004	0.0788

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.1680					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.7607					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.1700e-003	3.1000e-004	0.0347	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004		0.0747	0.0747	1.9000e-004		0.0788
Total	8.9319	3.1000e-004	0.0347	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004		0.0747	0.0747	1.9000e-004		0.0788

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.1680					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.7607					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.1700e-003	3.1000e-004	0.0347	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004		0.0747	0.0747	1.9000e-004		0.0788

Total	8.9319	3.1000e-004	0.0347	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004		0.0747	0.0747	1.9000e-004		0.0788
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7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Vegetation

Baker Ranch - Shopping Center

South Coast Air Basin, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Regional Shopping Center	341.45	1000sqft	7.84	341,450.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	8			Operational Year	2030
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	630.89	CH4 Intensity (lb/MWhr)	0.029	N2O Intensity (lb/MWhr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - No construction

Off-road Equipment - No construction

Trips and VMT - No construction

Demolition -

Grading -

Vehicle Trips - Used peak daily trip rate of 42.7 from traffic study for all days.

Woodstoves - Only gas fireplaces allowed, assumed all residences would have a fireplace.

Sequestration - Assuming trees would be added to site, estimating 50.

Construction Off-road Equipment Mitigation -

Off-road Equipment - No construction

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	OperationalYear	2014	2030
tblSequestration	NumberOfNewTrees	0.00	50.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblVehicleTrips	ST_TR	49.97	42.70
tblVehicleTrips	SU_TR	25.24	42.70
tblVehicleTrips	WD_TR	42.94	42.70

2.0 Emissions Summary

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	8.9319	3.1000e-004	0.0347	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004		0.0747	0.0747	1.9000e-004		0.0788
Energy	0.0207	0.1880	0.1579	1.1300e-003		0.0143	0.0143		0.0143	0.0143		225.6156	225.6156	4.3200e-003	4.1400e-003	226.9887
Mobile	28.8844	55.5547	268.0178	0.9877	66.9691	1.3813	68.3504	17.9019	1.2749	19.1768		71,154.0355	71,154.0355	2.0695		71,197.4951
Total	37.8370	55.7431	268.2104	0.9888	66.9691	1.3957	68.3649	17.9019	1.2893	19.1912		71,379.7259	71,379.7259	2.0740	4.1400e-003	71,424.5625

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	8.9319	3.1000e-004	0.0347	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004		0.0747	0.0747	1.9000e-004		0.0788
Energy	0.0207	0.1880	0.1579	1.1300e-003		0.0143	0.0143		0.0143	0.0143		225.6156	225.6156	4.3200e-003	4.1400e-003	226.9887
Mobile	28.8844	55.5547	268.0178	0.9877	66.9691	1.3813	68.3504	17.9019	1.2749	19.1768		71,154.0355	71,154.0355	2.0695		71,197.4951
Total	37.8370	55.7431	268.2104	0.9888	66.9691	1.3957	68.3649	17.9019	1.2893	19.1912		71,379.7259	71,379.7259	2.0740	4.1400e-003	71,424.5625

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2014	12/31/2013	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Demolition	Concrete/Industrial Saws	1	0.00	81	0.73

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Unmitigated	28.8844	55.5547	268.0178	0.9877	66.9691	1.3813	68.3504	17.9019	1.2749	19.1768		71,154.0355	71,154.0355	2.0695		71,197.4951
Mitigated	28.8844	55.5547	268.0178	0.9877	66.9691	1.3813	68.3504	17.9019	1.2749	19.1768		71,154.0355	71,154.0355	2.0695		71,197.4951

4.2 Trip Summary Information

	Average Daily Trip Rate	Unmitigated	Mitigated
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Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Regional Shopping Center	14,579.92	14,579.92	14,579.92	31,534,081	31,534,081
Total	14,579.92	14,579.92	14,579.92	31,534,081	31,534,081

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.491224	0.060821	0.184988	0.143129	0.045158	0.007219	0.016964	0.038507	0.002073	0.002552	0.004110	0.000541	0.002713

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0207	0.1880	0.1579	1.1300e-003		0.0143	0.0143		0.0143	0.0143		225.6156	225.6156	4.3200e-003	4.1400e-003	226.9887
NaturalGas Unmitigated	0.0207	0.1880	0.1579	1.1300e-003		0.0143	0.0143		0.0143	0.0143		225.6156	225.6156	4.3200e-003	4.1400e-003	226.9887

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Regional Shopping Center	1917.73	0.0207	0.1880	0.1579	1.1300e-003		0.0143	0.0143		0.0143	0.0143		225.6156	225.6156	4.3200e-003	4.1400e-003	226.9887
Total		0.0207	0.1880	0.1579	1.1300e-003		0.0143	0.0143		0.0143	0.0143		225.6156	225.6156	4.3200e-003	4.1400e-003	226.9887

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Regional Shopping Center	1.91773	0.0207	0.1880	0.1579	1.1300e-003		0.0143	0.0143		0.0143	0.0143		225.6156	225.6156	4.3200e-003	4.1400e-003	226.9887
Total		0.0207	0.1880	0.1579	1.1300e-003		0.0143	0.0143		0.0143	0.0143		225.6156	225.6156	4.3200e-003	4.1400e-003	226.9887

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
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Category	lb/day										lb/day				
Mitigated	8.9319	3.1000e-004	0.0347	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004		0.0747	0.0747	1.9000e-004	0.0788
Unmitigated	8.9319	3.1000e-004	0.0347	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004		0.0747	0.0747	1.9000e-004	0.0788

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.1680					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.7607					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.1700e-003	3.1000e-004	0.0347	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004		0.0747	0.0747	1.9000e-004		0.0788
Total	8.9319	3.1000e-004	0.0347	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004		0.0747	0.0747	1.9000e-004		0.0788

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.1680					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	6.7607					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	3.1700e-003	3.1000e-004	0.0347	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004		0.0747	0.0747	1.9000e-004		0.0788

Total	8.9319	3.1000e-004	0.0347	0.0000		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004		0.0747	0.0747	1.9000e-004		0.0788
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7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Vegetation

Baker Ranch - Shopping Center

South Coast Air Basin, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Regional Shopping Center	341.45	1000sqft	7.84	341,450.00	0

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	2.2	Precipitation Freq (Days)	31
Climate Zone	8			Operational Year	2030
Utility Company	Southern California Edison				
CO2 Intensity (lb/MW hr)	630.89	CH4 Intensity (lb/MW hr)	0.029	N2O Intensity (lb/MW hr)	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use -

Construction Phase - No construction

Off-road Equipment - No construction

Trips and VMT - No construction

Demolition -

Grading -

Vehicle Trips - Used peak daily trip rate of 42.7 from traffic study for all days.

Woodstoves - Only gas fireplaces allowed, assumed all residences would have a fireplace.

Sequestration - Assuming trees would be added to site, estimating 50.

Construction Off-road Equipment Mitigation -

Off-road Equipment - No construction

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	20.00	0.00
tblOffRoadEquipment	UsageHours	8.00	0.00
tblProjectCharacteristics	OperationalYear	2014	2030
tblSequestration	NumberOfNewTrees	0.00	50.00
tblTripsAndVMT	WorkerTripNumber	15.00	0.00
tblVehicleTrips	ST_TR	49.97	42.70
tblVehicleTrips	SU_TR	25.24	42.70
tblVehicleTrips	WD_TR	42.94	42.70

2.0 Emissions Summary

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

2.2 Overall Operational
Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	1.6299	4.0000e-005	4.3400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.4700e-003	8.4700e-003	2.0000e-005	0.0000	8.9300e-003
Energy	3.7700e-003	0.0343	0.0288	2.1000e-004		2.6100e-003	2.6100e-003		2.6100e-003	2.6100e-003	0.0000	1,288.0628	1,288.0628	0.0582	0.0126	1,293.1848
Mobile	4.9573	10.3103	48.8023	0.1818	11.9671	0.2505	12.2175	3.2038	0.2312	3.4350	0.0000	11,872.3198	11,872.3198	0.3407	0.0000	11,879.4754
Waste						0.0000	0.0000		0.0000	0.0000	72.7763	0.0000	72.7763	4.3010	0.0000	163.0964

Water						0.0000	0.0000		0.0000	0.0000	8.0240	143.5272	151.5512	0.8307	0.0208	175.4524
Total	6.5910	10.3446	48.8354	0.1820	11.9671	0.2531	12.2202	3.2038	0.2338	3.4376	80.8003	13,303.9182	13,384.7186	5.5307	0.0334	13,511.2179

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										M1/yr					
Area	1.6299	4.0000e-005	4.3400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.4700e-003	8.4700e-003	2.0000e-005	0.0000	8.9300e-003
Energy	3.7700e-003	0.0343	0.0288	2.1000e-004		2.6100e-003	2.6100e-003		2.6100e-003	2.6100e-003	0.0000	1,288.0628	1,288.0628	0.0582	0.0126	1,293.1848
Mobile	4.9573	10.3103	48.8023	0.1818	11.9671	0.2505	12.2175	3.2038	0.2312	3.4350	0.0000	11,872.3198	11,872.3198	0.3407	0.0000	11,879.4754
Waste						0.0000	0.0000		0.0000	0.0000	72.7763	0.0000	72.7763	4.3010	0.0000	163.0964
Water						0.0000	0.0000		0.0000	0.0000	8.0240	143.5272	151.5512	0.8306	0.0208	175.4396
Total	6.5910	10.3446	48.8354	0.1820	11.9671	0.2531	12.2202	3.2038	0.2338	3.4376	80.8003	13,303.9182	13,384.7186	5.5305	0.0334	13,511.2051

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.09	0.00

2.3 Vegetation

Vegetation

	CO2e
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Category	MT
New Trees	35.4000
Total	35.4000

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	1/1/2014	12/31/2013	5	0	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 0

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Excavators	3	8.00	162	0.38
Demolition	Rubber Tired Dozers	2	8.00	255	0.40
Demolition	Concrete/Industrial Saws	1	0.00	81	0.73

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	4.9573	10.3103	48.8023	0.1818	11.9671	0.2505	12.2175	3.2038	0.2312	3.4350	0.0000	11,872.3198	11,872.3198	0.3407	0.0000	11,879.4754
Unmitigated	4.9573	10.3103	48.8023	0.1818	11.9671	0.2505	12.2175	3.2038	0.2312	3.4350	0.0000	11,872.3198	11,872.3198	0.3407	0.0000	11,879.4754

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Regional Shopping Center	14,579.92	14,579.92	14,579.92	31,534,081	31,534,081
Total	14,579.92	14,579.92	14,579.92	31,534,081	31,534,081

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11

LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
0.491224	0.060821	0.184988	0.143129	0.045158	0.007219	0.016964	0.038507	0.002073	0.002552	0.004110	0.000541	0.002713

5.0 Energy Detail

4.4 Fleet Mix

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
NaturalGas Mitigated	3.7700e-003	0.0343	0.0288	2.1000e-004		2.6100e-003	2.6100e-003		2.6100e-003	2.6100e-003	0.0000	37.3532	37.3532	7.2000e-004	6.8000e-004	37.5805
NaturalGas Unmitigated	3.7700e-003	0.0343	0.0288	2.1000e-004		2.6100e-003	2.6100e-003		2.6100e-003	2.6100e-003	0.0000	37.3532	37.3532	7.2000e-004	6.8000e-004	37.5805
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,250.7096	1,250.7096	0.0575	0.0119	1,255.6042
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,250.7096	1,250.7096	0.0575	0.0119	1,255.6042

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Regional Shopping Center	699972	3.7700e-003	0.0343	0.0288	2.1000e-004		2.6100e-003	2.6100e-003		2.6100e-003	2.6100e-003	0.0000	37.3532	37.3532	7.2000e-004	6.8000e-004	37.5805
Total		3.7700e-003	0.0343	0.0288	2.1000e-004		2.6100e-003	2.6100e-003		2.6100e-003	2.6100e-003	0.0000	37.3532	37.3532	7.2000e-004	6.8000e-004	37.5805

Mitigated

	Natural Gas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Regional Shopping Center	699972	3.7700e-003	0.0343	0.0288	2.1000e-004		2.6100e-003	2.6100e-003		2.6100e-003	2.6100e-003	0.0000	37.3532	37.3532	7.2000e-004	6.8000e-004	37.5805
Total		3.7700e-003	0.0343	0.0288	2.1000e-004		2.6100e-003	2.6100e-003		2.6100e-003	2.6100e-003	0.0000	37.3532	37.3532	7.2000e-004	6.8000e-004	37.5805

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Regional Shopping Center	4.37056e+006	1,250.7096	0.0575	0.0119	1,255.6042
Total		1,250.7096	0.0575	0.0119	1,255.6042

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			

Regional Shopping Center	4.37056e+006	1,250.7096	0.0575	0.0119	1,255.6042
Total		1,250.7096	0.0575	0.0119	1,255.6042

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	1.6299	4.0000e-005	4.3400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.4700e-003	8.4700e-003	2.0000e-005	0.0000	8.9300e-003
Unmitigated	1.6299	4.0000e-005	4.3400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.4700e-003	8.4700e-003	2.0000e-005	0.0000	8.9300e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.3957					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.2338					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.0000e-004	4.0000e-005	4.3400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.4700e-003	8.4700e-003	2.0000e-005	0.0000	8.9300e-003

Total	1.6299	4.0000e-005	4.3400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.4700e-003	8.4700e-003	2.0000e-005	0.0000	8.9300e-003
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Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.3957					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	1.2338					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	4.0000e-004	4.0000e-005	4.3400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.4700e-003	8.4700e-003	2.0000e-005	0.0000	8.9300e-003
Total	1.6299	4.0000e-005	4.3400e-003	0.0000		2.0000e-005	2.0000e-005		2.0000e-005	2.0000e-005	0.0000	8.4700e-003	8.4700e-003	2.0000e-005	0.0000	8.9300e-003

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Unmitigated	151.5512	0.8307	0.0208	175.4524
Mitigated	151.5512	0.8306	0.0208	175.4396

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Regional Shopping Center	25.2921 / 15.5016	151.5512	0.8307	0.0208	175.4524
Total		151.5512	0.8307	0.0208	175.4524

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Regional Shopping Center	25.2921 / 15.5016	151.5512	0.8306	0.0208	175.4396
Total		151.5512	0.8306	0.0208	175.4396

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
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	MT/yr			
Mitigated	72.7763	4.3010	0.0000	163.0964
Unmitigated	72.7763	4.3010	0.0000	163.0964

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Regional Shopping Center	358.52	72.7763	4.3010	0.0000	163.0964
Total		72.7763	4.3010	0.0000	163.0964

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Regional Shopping Center	358.52	72.7763	4.3010	0.0000	163.0964
Total		72.7763	4.3010	0.0000	163.0964

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Vegetation

	Total CO2	CH4	N2O	CO2e
Category	MT			
Unmitigated	35.4000	0.0000	0.0000	35.4000

10.2 Net New Trees

Species Class

	Number of Trees	Total CO2	CH4	N2O	CO2e
		MT			
Miscellaneous	50	35.4000	0.0000	0.0000	35.4000
Total		35.4000	0.0000	0.0000	35.4000

